E-Data Collection Survey Engine

Version 4.0

E-Centric, Inc.

FEATURES

- **On-the-Fly Survey Builder***:* Create an entire survey, complete with a reporting system in minutes.
- **Reports & Pie Charts**: Generate reports on survey submission results including customizable pie charts. *(new)*
- **Survey Collections**: Better organize your surveys by grouping multiple surveys into survey collections.
- **E-mail Groups**:
    - Create email distribution lists.
    - *Invite* email recipients to complete only surveys you want them to complete.
    - *Remind* invitees to take surveys who did not complete all surveys they were asked to take.
- **E-mail Composer**: Create plain text or *HTML e-mails* using a *WYSIWYG editor*.
- **Survey Layout Manager**: Upload HTML and apply custom designs to surveys. *(new)*
- **Administrative Security**:
    - Create *Departments* allowing *Administrative Users* to manage only surveys pertaining to their respective department.
    - *Assign roles to Administrative Users* determining who can view reports, create surveys, or publish surveys.
- **Test Data**: While logged in as an administrator, submit surveys to create test *data to preview reports*.
- **Survey Security**:
    - *Allow* survey takers to submit the survey only once or an unlimited number of times.
    - Determine type of *security* to apply to survey collections (*Cookies, IP Tracking, Email Invitations, or none*)
    - Set the *date range* for which the Survey will be active.
- **Survey Logos**: *Easily upload and apply an image* to appear on a survey.
- **Survey Organization**:
    - Organize survey questions into sections.

- Paging options allow you to choose between a single page layout or a multi-page layout which inserts page breaks between sections. *(new)*

- *Assign multiple response types* to a single question. E.g., The question, "What is the city and state in which you reside" may have two fields – one text field for the user to enter the city name and one dropdown list to select the state.

- **Progress Indicators:** Multi-page surveys may display progress bars (where each bar represents a page) to indicate to the survey-taker how far along in the process they are currently at. Width and bar colors are customizable. *(new)*

- **Answer Matrices**: Create Answer Matrices for groups of questions.

- **Comment Boxes**: Allow users to enter optional comments for questions with other response types. E.g., The question, "Do you enjoy working at ABC Bank? (If you answer "no," please explain.)" will have a "yes/no" radiobutton list as well as a comments field.

- **Field Validation**: Specify which response fields are required fields.

- Specify *input control types* for each response type, including single response controls (e.g., dropdownlists) or multiple response controls (e.g., checkboxes).

    - Textboxes
    - Radiobuttons
    - Dropdown lists
    - Checkboxes *(new)*
    - Calendar controls – two to choose from *(new)*
    - E-mail control (validates input)

- Specify your own *custom JavaScript* for response controls.

- Use data from *external sources* (i.e., another database on the server) to populate dropdownlists with answer options.

- **Data Analysis**:

    - *Filter report results* by date and, optionally, by question responses (i.e., determine custom filters to use as criteria for generating reports).

    - *Multiple report views* (to display comments, raw scores, question averages, section averages, text answers, or any combination of the above).

    - View reports *averaging results* collectively or view reports on individual survey submissions *one by one*.

    - Detailed Reports produce a *visual representation* of response value averages (by question and by section).

    - *Pie Chart view* allows you to customize the display *(new)*:

        - Rotate Pie charts
        - Resize the graphics
        - Show or hide the legend
        - Show or hide slice labels and percentages
        - Displace a slice for emphasis
        - Display by section, question or the entire survey.

- **Copy Surveys**: Copy the entire structure of a survey to base an all new survey on an existing one with just a few clicks. *(new)*

- **Print Reports:** Easily toggle reports between “Printer Friendly” and “Web Friendly” versions to print only what you need. *(new)*

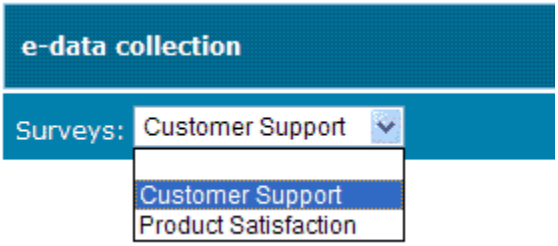
- **Ease of Use***: Requires no coding*; simply install the database and web application and begin building surveys.

- **Customizable**: With the purchase of the source code version you can make modifications to fit your specific requirements.

SURVEY HIERARCHY

Before you begin to build surveys, it is important that you understand the database relationships, or survey hierarchy.

A *Survey Collection* is simply a way to group multiple surveys together. For example, your company may have a collection to gather customer feedback on technical support and on the products. The collection might be named "Customer Satisfaction" and may consist of two separate surveys: "Technical Support" and "Product Satisfaction". When the customer visits the survey collection URL, he will choose one of the surveys from a dropdown list within a survey page or from links on the collection index page. If only one active survey is available within the collection, the menu will not appear and, instead, the collection will always default to the one survey it contains.



You can view all active survey collections and all the active surveys created for them on the *Survey Index* page: http://localhost/EDCv4/

(Note: The above URL redirects to the default survey index page: http://localhost/EDCv4/pages/index.aspx)

Each survey is made up of *sections* which, as expected, contain questions.

Although in most cases the questions will require a single response, some questions may require more than one type of response. *E-Data Collection* allows more than one response input per question. For example, if the question is, "Would you like to receive email offers? If so, please provide an email address," the question might have a "yes/no" radiobutton list as well as an email textbox control. Furthermore, *E-Data Collection* allows you to add optional comment boxes to questions.

There are two types of response that can be assigned to each question. In the admin screens they are all referred to as "Answer Groups" and they are as follows:

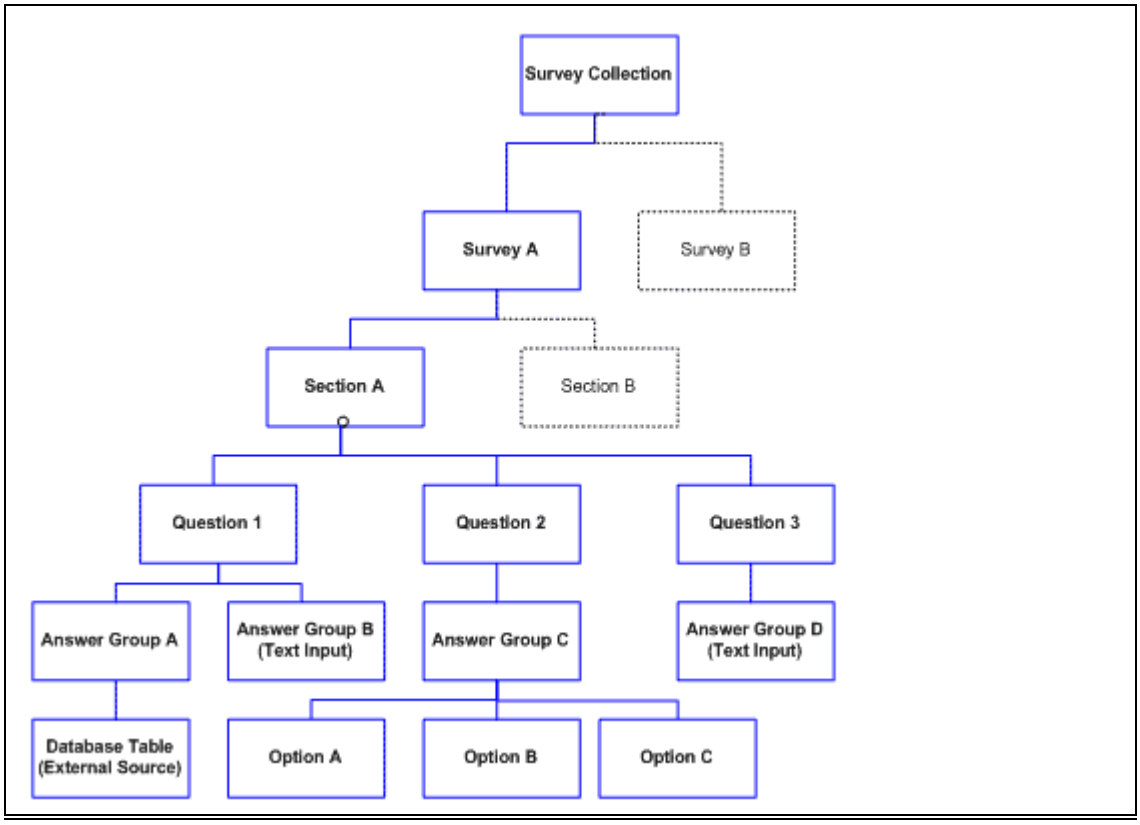
- Text Input*:* single line textbox, multiline textbox, email control, date control
- Option Groups*:* dropdown lists, radiobutton lists, and checkbox lists

Text inputs are straightforward as they don't require the survey designer to create options. The option groups, on the other hand, are created by the administrator in one of two ways:

- The administrator can specify the options for a group which will then be assigned to a question. For example, your answer group may be named "Quality" and the answer options may consist of "poor", "fair", "good", and "excellent". In addition to text, each option may (or may not) have a numeric value used for averaging results in the report builder.

- The administrator can fetch the options from a table in another database. For instance, if the question is "What is your instructor's name?" the options may be pulled from a table named "Instructors" in the University database. This will then populate a dropdownlist.

Figure 1 below displays the survey hierarchy described above. (Pay particular attention to the question answer groups.)



The diagram above demonstrates the hierarchy applicable in most scenarios. There is, however, one other scenario which has not yet been mentioned. *Answer Matrices* such as the one shown below, are actually answer groups that contain other answer groups. And, rather than assigning the matrix to questions, we assign them to the section itself. The answer matrix in the example below is named "Importance:Quality" and it contains two answer groups ("Importance" and "Quality"). Notice how each answer group appears three times (once for each of the questions). When you add a question to a section that uses an answer matrix, it is automatically added to the grid with corresponding radio button groups.

	Importance 1 = Least Important, 4 = Most Important				**Quality**			
	1	2	3	4	Poor	Fair	Good	Excellent
Friendliness	◉	○	○	○	○	◉	○	○
Service	◉	○	○	○	○	◉	○	○
Ability to Communicate	◉	○	○	○	○	◉	○	○

ADMINISTRATION

You can use the following URL to access the Admin Tool: http://localhost/EDCv4/admin/
(Note: The above URL redirects to the login page: http://localhost/EDCv4/admin/login.aspx)

Navigation

After logging into the survey administration tool, you are redirected to the *Analyzer* page. From here, you can easily navigate to any other admin page to which you have access (based on your role) by using the navigation tabs, shown below:

Some things to note about the navigation tabs follow:

- Depending on your roles you may or may not see all of the above tabs, or they may be named differently. For example, a user who only has the "Author" role, will see a tab labeled "Secure" in place of the "Manage" tab, and instead of managing all users, the author may only update his own password there.
- Each tab may have multiple sub-links. On the "Manage" tab visible above, there are two sub-links: Account Manager and Department Manager. Since the user is currently visiting the Department Manager page, the link is readonly and the star icon indicates which page is currently active.
- Each sub-link has a corresponding short description.
- View sub-links and navigate to a page on a different tab from the active one simply by moving your mouse pointer over the tab. In other words, you do not need to click on the other tabs to view its sub-links.
- To log out of the system, click on "Logout" in the lower-right of the header (above the tabs).

Icons

The following table shows the icons used throughout the survey engine and what they indicate, as well as whether or not they are clickable and functional:

Icon	Meaning	Function
	Indicates the active page in a list of sub-links for a tab.	Not Clickable
	Indicates page in a list of sub-links that is not the active page, but can be navigated to by clicking on it.	Not Clickable
	Preview button for the selected resource	Click to preview

	Delete button for the selected resource. (Requires user confirmation.)	Click to delete
	Details for the corresponding resource.	Click to view details
	Purge test data of selected survey	Click to delete
	Copy the selected surveys structure to create a new survey.	Click to copy
	Promote resource up one row in the resource table.	Click to move up
	Demote resource down one row in the resource table.	Click to move down
	Edit selected resource	Click to edit
	Indicates that the selected Response group is a Matrix	Not Clickable
	Help button for the resource or form field.	Click for help

Departments

Each user belongs to a single *Department*. Only *Master Admin* users can create or modify *departments*. While it is possible to rename the *[Default]* department, it may not be deleted. If you or your organization do not require separate departments, all users may be assigned to the *[Default]* department.

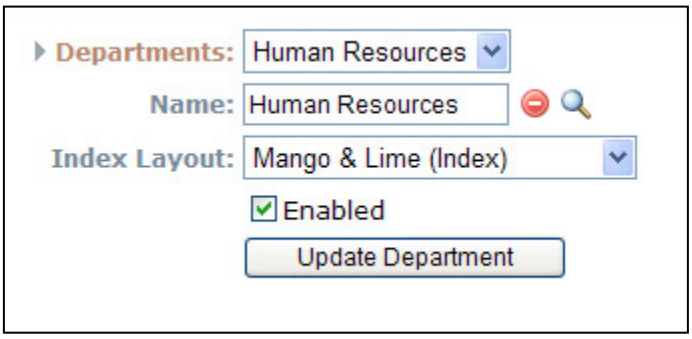
Users may belong to only one department and may only manage surveys and associated data for their respective department. Only *Master Admin* accounts have rights to manage surveys and users for all departments. As such, while a *Master Admin* navigates around the admin tool, he is presented with an additional *Department* dropdownlist by which he may select other departments to manage. Other users (who are not Master Admins) are not presented with this option.

Note: Most of the screenshots presented throughout this User Manual do not display the aforementioned departments dropdownlist since for most users who have more limited roles this option will not be available.

While you may have the need for more than one department, you will likely still want *certain assets* (such as Answer groups, Sources, Designs and Images) to be shared by all. For example, “yes/no” answer groups should be shared for all survey builders to use regardless of the department they are assigned to, as this is a common answer group. In order to share assets among all departments, simply create the asset within the *[Default]* department. While other departments will not be able to make modifications to those assets, they can use all assets created within the *[Default]* department within their surveys.

Important: All assets created for the [Default] department are shared with all other departments. Thus, if you have multiple departments, the [Default] department should only be reserved for creating common resources and managing departments.

To create a new department, log in under a *Master Admin* account. Click the *Department Manager* link on the *Manage* tab. Select *Add Department* from the *Departments* dropdownlist. Enter a unique name for the department, select an *Index Layout* – "Default Design (Index)" if no others have been created – and click the *Add Department* button. The screen will refresh with your new department selected in the dropdownlist and will enter update mode.



When a department is disabled, users assigned to that department are unable to log into the admin tool and surveys created by those users will be deactivated.

The Index Layout is the design which will be applied to the department's survey index page (which lists all available survey collections within that department).

When a department is deleted, the department's users are also deleted. However, the other assets (Survey Groups, Answer Groups, etc.) are not deleted. Instead, the user deleting the department takes ownership of these assets. Therefore, if you want to delete the departments as well, you should delete the assets prior to deleting the department.

User Accounts

The Admin Tool implements role-based security. Each role has certain rights, and when multiple roles are assigned to a user account, the least restrictive rights apply. The roles are as follows:

BUSINESS ANALYST:

The business analyst is able to generate reports for his department on any and all of the surveys that have live data – that is, data which is not test data created by other administrators when they were building their surveys.

SURVEY AUTHOR:

This user may create new survey collections and surveys for his department. When the *author* creates a collection or survey, he is automatically the *Owner* of that collection or survey. If another user created a collection, the *Survey Author* may nevertheless create new surveys belonging to that collection. This is because the *Survey Author* cannot publish a survey. Likewise, the author may not delete the surveys or collections he creates.

In addition to creating surveys and collections, the author may also create new *Answer Groups* to use with surveys.

The *Survey Author* may edit any of his collections, surveys, or answer groups as long as he remains the *Owner* and the collections or surveys are not published. (The author may not edit his own answer groups if other administrators created surveys that utilize the answer group in question.)

Finally, the author may view *Demo Reports* with test data. When an administrator is logged into the Admin Tool, previews a survey, and submits it, the responses are considered test data. Therefore, *Demo Reports* offer the author and publisher a way to simulate the reports without viewing the actual results ("Live Data"). If a user should have all the rights of a *Survey Author* but

at the same time be able to view "Live Data", the user should be assigned both roles: *Survey Author* and *Business Analyst.*

SURVEY PUBLISHER:

A *Survey Publisher* may create new survey collections, surveys, answer groups (response options), create new sources for answer groups, create designs and upload images to be assigned to surveys. This user may also edit the same, whether or not he is the *Owner*. The publisher may also activate or deactivate surveys. When a survey or collection is activated it is live (i.e., "published" on the internet or intranet). The publisher may also *transfer Ownership* of answer groups and surveys to other authors (i.e., reassign work to an author who did not create the survey initially).

Unlike the *Author*, the *Publisher* may edit surveys that are Live. He may also delete survey collections, surveys, and images, or purge a survey's test data from the database.

Additionally, the *Publisher* may create e-mail groups, add e-mail addresses to the groups, compose and send e-mail invitations and reminders.

Like the *Author,* the *Publisher* may only view *Demo Reports*, and may not generate reports on "Live Data" If a user should have all the rights of a *Survey Publisher* but at the same time be able to view "Live Data", the user should be assigned both roles: *Survey Publisher* and *Business Analyst.*

DEPARTMENT ADMIN

The *Department Admin* has the combined rights of *Survey Publisher* and *Business Analyst* in addition to the right to *Manage User Accounts.* In other words, the *Department Admin* has full rights to perform all functions within his department. In addition to those rights listed for the publisher and analyst, the *Department Admin* can create new user accounts, assign roles to new users, activate and deactivate users, and specify the department's index layout. This user may not, however, modify his own roles. Once a Department Admin, always a Department Admin (unless another *Department Admin* or *Master Admin* deactivates or modifies his account).

Since the *Department Admin* may view reports on either "Test Data" or "Live Data" and has full control over surveys, combining this role with others would have no effect whatsoever.

MASTER ADMIN

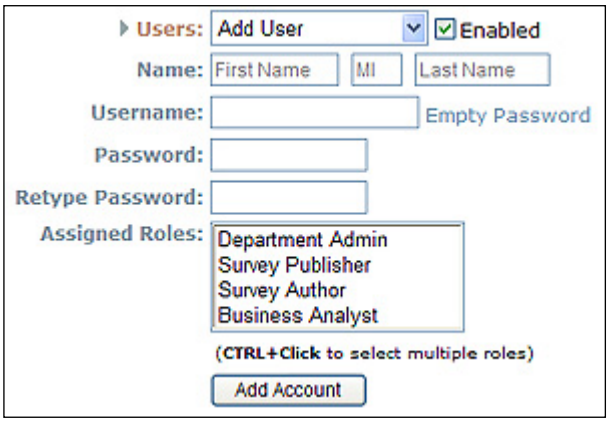
The *Master Admin* differs from *Department Admins* in just one respect: While *Department Admins* have full control over their respective departments, the *Master Admin* has full control over all departments and, in fact, is the only type of user who can create and manage other departments. *Master Admin* accounts can belong to the *[Default]* department only.

***NOTE**: This document assumes the perspective of *Department Admin, except where otherwise noted*.

Manage Users

When you log in as either *Master Admin* or *Department Admin,* you can manage user accounts. To access the *user accounts* screen, click on the `Manage` tab or the `Account Manager` sub-link in the *Manage* panel.

Your own account details will appear by default. You may update your name, username, or password, but not your own roles.



To add a new account, select "Add User" from the `Users` dropdownlist. Enter a `Name` (first and last are required, while the middle initial is optional), a unique `Username`, and select the `Role(s)` that should apply to the new user. If no roles are selected, the user will not be able to log in to the Admin Tool. Although a user can be assigned all roles, having all roles assigned and having only *Master Admin* or *Department Admin* assigned has the same effect: *Master Admin* or *Department Admin* rights will apply. Likewise, selecting *Survey Publisher* and *Survey Author* roles is the same as selecting only *Survey Publisher: Survey Publisher* rights apply. However, if the user should have *Survey Publisher* (or *Survey Author)* rights and also be able to view "Live Data", *Survey Publisher* (or *Survey Author*) must be selected in addition to *Business Analyst.*

If you want the new user to log in for the first time without supplying a password, click the `Empty Password` link to hide the password fields (if they are not already hidden). If the password fields are hidden, the link changes to `Set Password`. Click `Set Password` to reveal the password fields. Whether you set a password or not, the first time a user logs into the Admin Tool, the user will be required to change the password. The length of the password must be between six and 12 characters and must not be the same as the original. The user will not be able to use the Admin Tool until the password has be updated.

You may create accounts as either *enabled* or *disabled.* When an account is disabled, the user may not log into the tool.

Click the `Add Account` button to create the new account. The new user's name will appear selected in the *Users* dropdownlist and the form will change to update mode (i.e., the button's text will now read "Update Account".)

To update a user's account, select the user's name from the *Users* dropdownlist. When selected, the form is populated with the user's details. If you wish to modify the name, username, password or roles, you must click the `Update Account` button to apply the changes. If, however, you only wish to disable or enable the account, simply check or uncheck the `Enable` checkbox. The form will process the change automatically.

As when you create a new user, when you update a user's password (other than your own), the next time that user logs into the Admin Tool, he or she will be required to change his or her password.

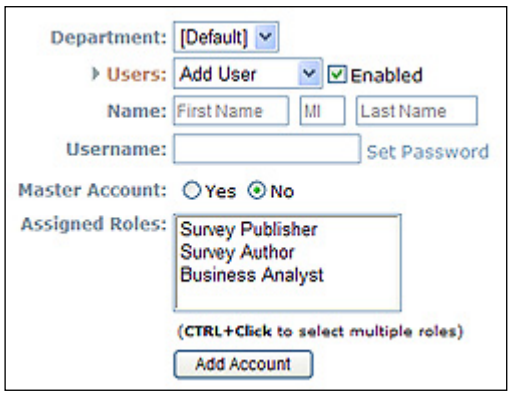
Note that while *Master Admin* and *Department Admin* users have the `Account Manager` under the `Manage` tab in the header menu, all other users have the `Update Password` link under the `Secure` tab. Clicking on this link allows users to view their own user details and enables them to change their password as they please. They may not view or update other users' details.

Note the following about *Master Admin* and the *[Default]* department:

- The *Master Admin* user is, in fact, a *Department Admin* of the *[Default]* department as well as all other departments.
- If only one department exists in the system (i.e., *[Default]*), the *Master Admin* can add other *Master Admin* accounts, *Survey Publishers, Authors, or Business Analysts* to the *[Default]*

department. However, if other departments are created, all of the users in the *[Default]* department become *Master Admins*.

- As long as there is just one department in the database (i.e., *[Default]*), the *Master Admin* will be presented with a slightly different *Accounts* screen. In this case, there is an additional option for selecting whether the new user account should be a `Master Account`. This takes the place of the `Department Admin` role in the previous screenshot. When the *Master Account* option is set to *No*, the administrator may select other roles from the listbox. However, when *Yes* is selected, `Assigned Roles` is not available. Once additional departments have been created, all *[Default]* department users become *Master Admins* and therefore, the *Master Account* option will always be disabled with *Yes* selected.


Department: [Default]
Users: Add User Enabled
Name: First Name MI Last Name
Username: Set Password
Master Account: Yes No
Assigned Roles: Survey Publisher Survey Author Business Analyst
(CTRL+Click to select multiple roles)
Add Account

The following section discusses the recommended process for creating survey collections and surveys using the *Survey Builder* and other tools.

Recommended Process

The `Build` tab contains the core tasks for building surveys, and thus survey builders will no doubt find that most of their tasks will be performed using this panel:

Browse
Analyze
Build
Invite
Design
Manage
Survey Builder: Cre Build Surveys collections (AKA "Groups") and surveys.
Option Manager: Manage options for multiple-choice responses (dropdownlists, checkboxes, etc.).
Source Manager: Automatically populate response options from a SQL database table.

Administrators, publishers and authors may create survey collections, surveys, sections, questions, and answer groups.

When building a survey, the author must select a design to apply to the survey and can optionally select progress indicators and/or a logo to appear at the top of the form. Furthermore, after adding a question, the author adds input fields, oftentimes consisting of common answer options such as “Yes/No”. It is therefore advisable to have the *Designs* and the *Answer Groups* in the database prior to beginning the survey authoring process.

Thus, administrators would do well to create the answer groups, upload the necessary images, and set up designs and progress indicators *prior to* creating the surveys. This will enable authors to create the surveys without having to navigate back and forth between the *Survey Builder* and other screens like the *Manage Sources* and *Manage Images* screen. In other words, you cannot, for example, add a response option group to a question if that option group does not yet exist, or add an image to a survey when the image does not yet exist; which is why it is recommended that designs and images be uploaded and options defined prior to creating surveys.

The logo, progress indicator and design managers are found on the `Design` tab:

Note that the Design tab and the Source Manager link on the Build tab are not available to *Survey Authors.* Thus, it is advisable for the Department or Master Admins to create these resources before beginning to allow those users to author surveys.

Once images, progress indicators, page layouts, external sources, and answer group options have been created, the author will spend most of his time authoring surveys using the Survey Builder form.

Survey Authors do not have access to the Source Manager. They only have the first two menu options: Survey Builder and Option Manager. Only *Department Admins* and *Survey Publishers* can manage images and sources as modification of these items can potentially affect many surveys. Therefore, before an author begins to create his or her own surveys, a *Publisher or Department Admin* user should set up common resources that might be useful to authors as they create their surveys.

To recap: the recommended process is as follows: Designs and Images > Sources > Answer groups > Surveys

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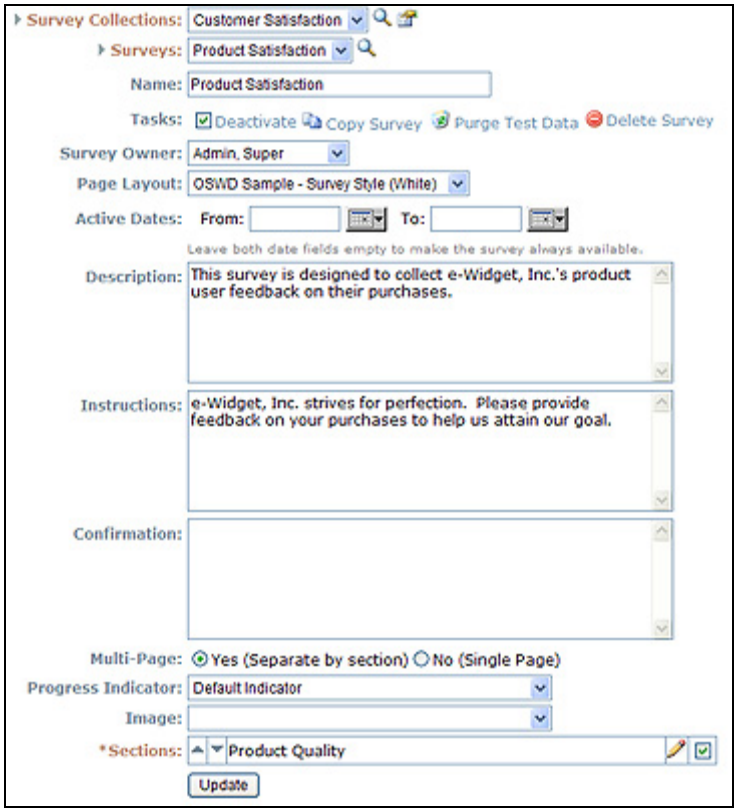
Form Navigation

Before proceeding to develop surveys, you must understand the special form navigation used particularly in the Survey Builder, and to a lesser extent on the other admin screens.

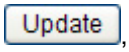
The form has a unique design that facilitates navigation from one level to another without leaving the page. The advantages of this form design will soon become apparent.


Survey Collections: Customer Satisfaction
Surveys: Product Satisfaction
Name: Product Satisfaction
Tasks: Deactivate Copy Survey Purge Test Data Delete Survey
Survey Owner: Admin, Super
Page Layout: OSWD Sample - Survey Style (White)
Active Dates: From: To:
Leave both date fields empty to make the survey always available.
Description: This survey is designed to collect e-Widget, Inc.'s product user feedback on their purchases.
Instructions: e-Widget, Inc. strives for perfection. Please provide feedback on your purchases to help us attain our goal.
Confirmation:
Multi-Page: Yes (Separate by section) No (Single Page)
Progress Indicator: Default Indicator
Image:
*Sections: Product Quality
Update

The form is based on the hierarchy described earlier. When Survey Builder is selected from the menu, the administrator is presented with the survey collection form where he can either add

a new `Survey Collection` or select an existing one to view or edit its details. Included in the details is a dropdown list of all `Surveys` it contains. If one of the surveys is selected from the dropdownlist, the administrator will view the selected survey's details for editing (seen in the screenshot above).

The boldface link captions at the top of the form serve as vertical breadcrumbs (i.e., "Survey Collections > Surveys"), suggesting that the **Surveys** form is currently selected. The boldface link caption at the bottom of the form suggests the next level down, i.e., **Survey's** child form is **Sections**. From here, the administrator can do any of the following:

- drill down still further to *edit existing sections* in the survey , or
- *add new sections* for the selected survey (***Sections:**), or
- *reorder the survey sections* using the promote/demote buttons , or
- *activate or deactivate* the selected survey or any of the survey sections , or
- *update* the selected survey details  , or
- *preview* the selected survey, the selected image, or the selected survey collection , or
- *delete* the selected survey , or
- *copy* the selected survey's structure to build a new survey , or
- *purge test data* for the selected survey , or
- return to the selected survey collection's *details* , or
- select a different survey to view or edit from the `Surveys` dropdown list, or
- select a different survey collection to view or edit from the `Survey Collections` dropdown list, or
- select "Add Survey" from the `Surveys` dropdown list to *create a new survey*, or
- select "Add Collection" from the `Survey Collections` dropdown list to create a *new collection*.

In other words, on whichever form you find yourself within the Survey Builder screen, you can easily navigate to almost any other form to carry out the action you wish to perform. It is, however, imperative you understand the symbols and icons presented in the bulleted list above.

Note that if you navigate *downward* to `Section` details or *upward* to the parent `Survey Collection` without clicking on the *Update* button, any changes you made to the *Survey* details will not be committed.

Navigating to the lowest level in the hierarchy, the `Answer Options` form, you are presented with the following screen:

Survey Collections: Customer Satisfaction
Surveys: Product Satisfaction
Sections: Product Quality
Questions: 1. How do you rate the overall quality of our...
Answer Options: Quality - DropDownList
Option Group: Quality Deactivate
Control Type: DropDownList
Client Script:
Required Field: True False
Update

In this screen, we are currently viewing the details of the "Quality – Dropdownlist" *Answer Option Group* assigned to *question* number 1 of the "Product Quality" *section* of the "Product Satisfaction" *survey* of the "Customer Satisfaction" *survey collection.* This screenshot demonstrates again, how we can easily navigate back to any level to add to, edit or preview any of the higher levels.

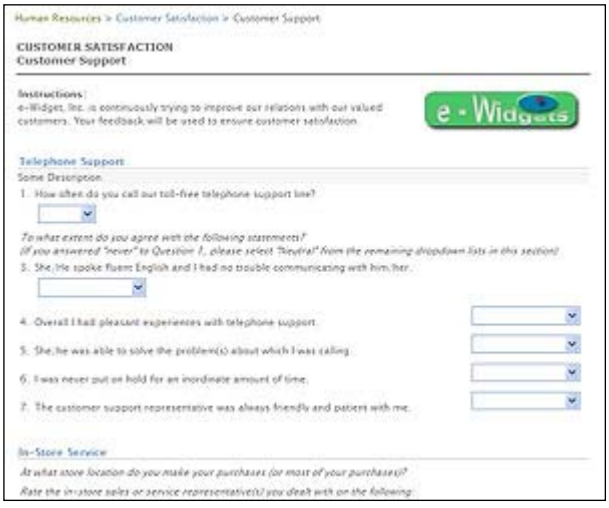
Admin Screens

Now that we have reviewed the form navigation and recommended process for building surveys, we will proceed to discuss each of the administrative screens. However, you might find, at this point, that it will be helpful to open the `Survey Builder` in a separate window and observe how the sample survey collection ("Customer Satisfaction") was created. *Without modifying the surveys*, navigate around the builder and *preview* the surveys. Submit the survey a few times and view the reports. Having some familiarity with how the sample surveys were built will make the content in this user guide clearer.

First we will discuss *Designs, Progress Indicators* and *Images,* all of which can be managed from the `Design` tab. If you wish to forego customizing survey designs at this time, and wish to dive right into the creation of survey forms, you can skip over the following three sections.

Manage Images

Survey authors may want to add an image (the company logo, for instance) to a survey. Once assigned to a survey, the image will appear on the survey below and to the right of the title (or to the right of the instructions if instructions exist for the survey), as the screenshot on the right demonstrates.



To make an image available, upload images on the `Logo Manager` screen. You will find this link on the `Design` tab's panel.

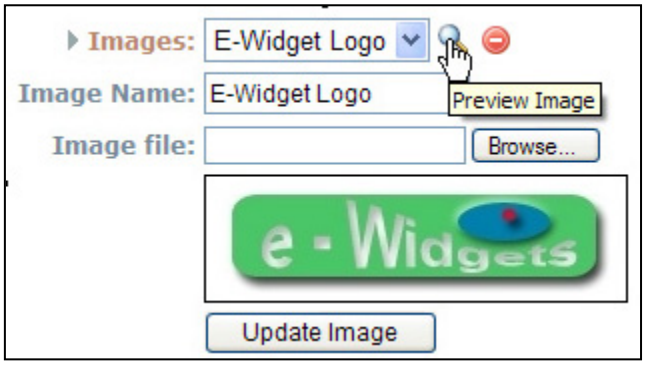
This form is only available to *Department Admin* users and *Survey Publishers* (roles with sufficient rights to manage images within their own department).

The admin URL to the `Logo Manager` is: http://localhost/EDCv4/admin/ImageUpload.aspx

To add an image, select "Add Image" from the **Images** dropdown list, provide a descriptive name for this image in the **Image Name** text box, specify the file path in the **Image File** textbox, and click the `Add Image` button.

You will notice that the new image's name appears selected in the **Images** dropdown list, and the button changes to "`Update Image`". Also, in this mode (*edit mode*) two additional buttons appear: Delete and Preview (icon buttons). Clicking the preview button (magnifying lens) will display the image within the form; clicking it a second time will hide the image.

At a later time, if you wish to update the image, simply select the image name from the *Images* dropdown list, select a new file to replace the existing one with, and click `Update Image`.



Note that if you upload an image that is larger than 300 pixels in width and/or 200 pixels in height, the file will be resized to the maximum allowable height and/or width.

Also note that you are able to delete images even when an image is associated with a survey. Deleting an associated image, will also delete the association. It is advisable to verify that the logo is not in use, before deleting an image.

Now that you have added images to the system, the images may be associated with surveys. This is done simply by selecting the descriptive image name in the **Surveys** details form in the `Survey Builder` screen which will be discussed later at greater length.

Progress Indicators

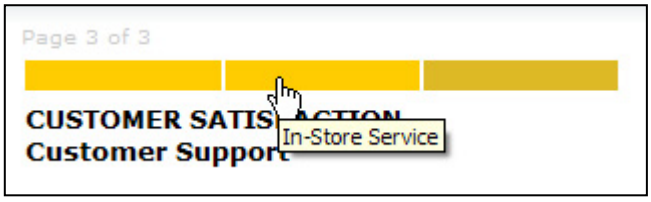
Progress Indicators enable the end-user to get a sense of how much of a multi-page survey has already been completed and how much is still to come. Each bar in the *progress indicator* represents a single page, and the different colors suggest whether the respective bar indicates a

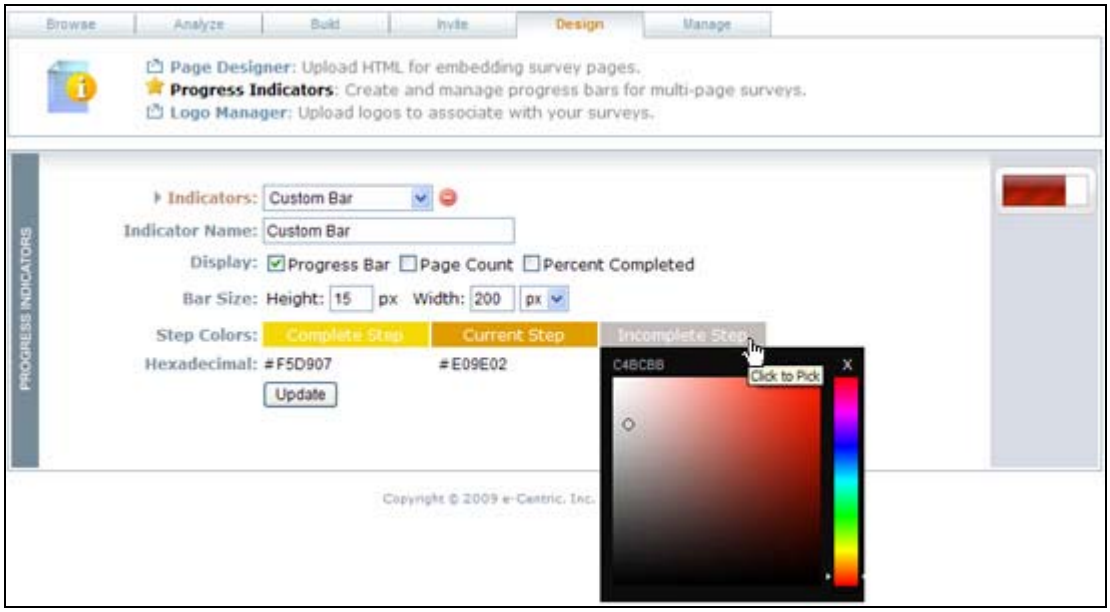
completed page, the current page or a page that remains to be completed. The following screen capture demonstrates that the survey taker is currently on the second of three pages:

Completing 66% (Page 2 of 3)
CUSTOMER SATISFACTION
Customer Support
In-Store Service
1. At what store location do you make your purchases (or most of your pu

There are also subtle gray labels specifying the percentage completed and the page numbers and total page count. Depending on your preference, you can hide or show any label or the bar itself. Thus if you only want page numbering without the percentage and without the bars, you can set that preference on the *Progress Indicator* admin screen.

One of the advantages, however, of including a progress bar is that it gives your users the chance to return to previous pages without having to repeatedly click the back button. Also, by mousing over any of the bars, the survey taker can read the section title for that step.





Create a new progress indicator by selecting *Add Indicator* from the **Indicators** dropdownlist and specifying a unique name for it. Check each of the features that you want to include in your progress indicator. If you uncheck *Progress Bar*, *Bar Size, Step Colors* and *Hexadecimal* preferences will be hidden from view, as these preferences only relate to *Progress Bars.*

Check *Page Count* if you want to include page numbering (e.g., “Page 2 of 3”).

Check *Percent Completed* if you want to include the percent of the survey that will be completed once the current page is completed.

If either *Page Count* or *Percent Completed* is checked and the *Progress Bar* is also checked, the text will appear above the bar.

If *Progress Bar* is checked, you can specify its height, in pixels, and its width, in either pixels or percentage as it relates to the available page width,

If *Page Count* is checked, but *Percent Completed* is not, page numbers will appear without parentheses; but if both are checked, page numbering will appear within parentheses.

You can also specify colors for individual step types: completed step, current step, or incomplete step. You can choose the color from the color picker by clicking on the step’s bar, or you can specify the specific hexadecimal code in the space beneath the bars.

After specifying your preferences, click the button to either add or update the progress indicator.

Once added to the system, the indicator will appear in a dropdownlist in the `Survey Builder` to select and apply to surveys. If the survey does not implement paging, however, the preference will be ignored, and no progress bar will appear in the survey. (Implementation of paging will be discussed in the section on the `Survey Builder` admin screen.)

Page Designer

Note: Knowledge of HTML is highly beneficial to enjoy full control over page layouts. This section assumes the designer has an understanding of HTML.

While the `Logo Manager` enables you to upload images to appear within the survey, the `Page Designer`, by contrast, allows you to control the look-and-feel of *the page containing the survey*. For example if you want to add a custom header and footer to your survey to keep the look-and-feel of it consistent with the rest of your Web site, use this form to submit your HTML design. Just be sure to enter **`@@Content`** in the HTML, between header and footer, which is where you’ll want the Survey form is to be positioned.

The **`@@Content`** variable must appear one time for every design and, depending on the version of E-Data Collection you use, the **`@@Footer`** variable may also be required.

When loading pages, **`@@Footer`** is replaced with the standard E-Data Collection footer.

The `Page Designer` form is only available to *Department Admin* users and *Survey Publishers* (roles that have sufficient rights to manage designs within their respective departments).

The admin URL to `Page Layouts` is: http://localhost/EDCv4/admin/Design.aspx (See screenshot on the next page).

Like all resources, you are required to give each new design a unique **Name**.

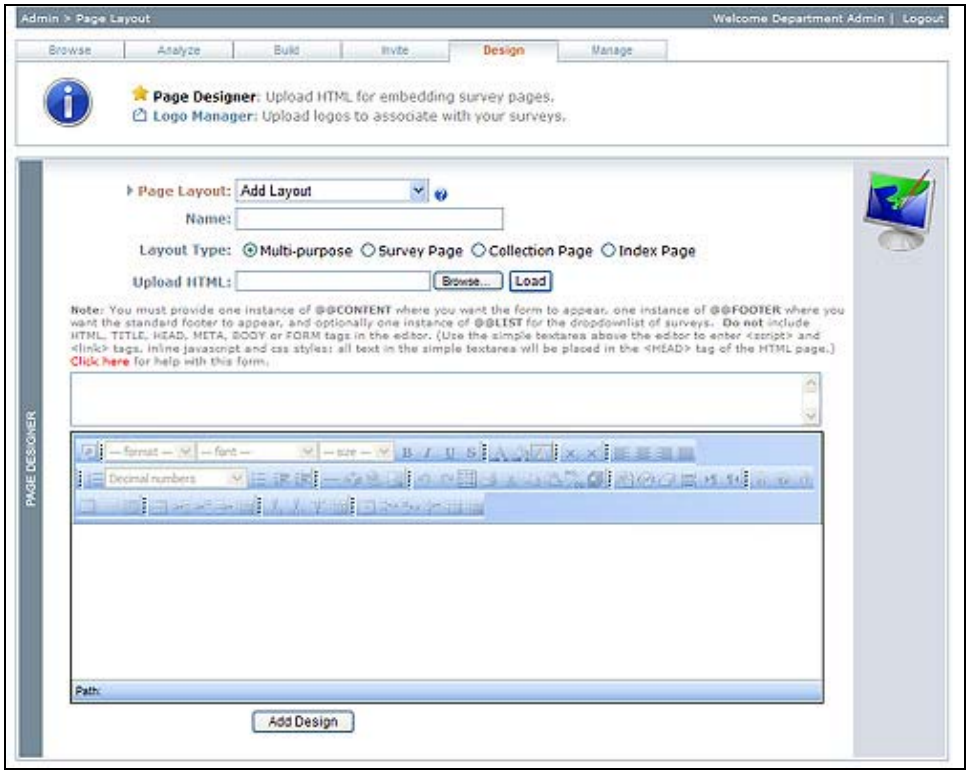
Select the **Layout Type** from the following options: Multi-Purpose, Survey Page, Collection Page, Index Page. The survey engine produces three types of page. When you design layouts you can specify which page type it should apply to. If one design should be used for all types of pages, you can choose to create just *Multi-Purpose* layout. On the other hand, for greater control over the look-and-feel of each page type, you can create three separate designs, one for each page type: Survey Index, Survey Collection and individual Survey.

Page types and the functionality each provides follows:

- **Survey Index:** When a department is specified, this page lists all active collections within the department along with collection descriptions.

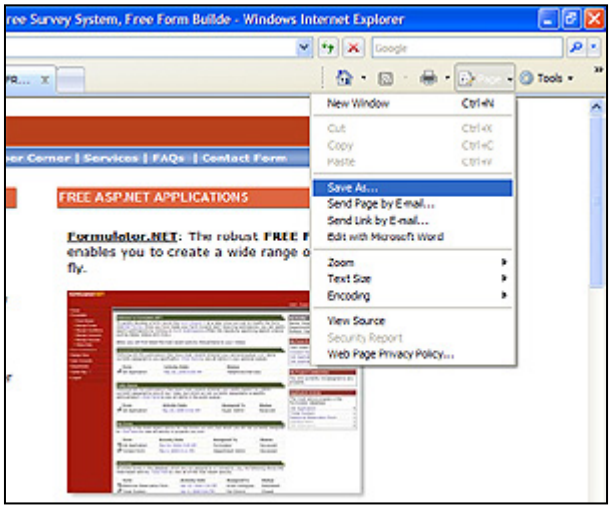
- **Collection Page:** When a collection contains more than one survey, this page lists all the available surveys within the selected collection. If only one survey exists, this page will automatically redirect to the one survey contained therein and load it.

- **Survey Page:** Displays the survey form.



Examples of each of these designs are available through the Help button (icon) beside the Page Layout dropdown list.

Once the Layout Type has been decided upon, it's time to upload the HTML. One method to quickly and easily submit the design is to open a Web browser to the URL of your Web site (which presumably is essentially the same design that shall be applied to the E-Data Collection content pages). With your Web site's page open in a browser, click on `Page` in the browser's toolbar and select `Save As…` and save `Web Page (HTML Only)` to your hard drive.



It is important to note that, no Design resources such as stylesheets, script files or images may be uploaded to E-Data

Collection. Therefore, you are required to verify that all references to images and other files have specified Fully Qualified URLs. Thus relative references such as `../images/logonew.gif` is not sufficient and must be replaced with the complete URL such as `http://www.dotnetgoodies.com/images/logonew.gif`.

Once you have created an HTML file that meets the requirements (including the presence of the two required variables -- **`@@Content`** and **`@@Footer`**), either upload the file or copy the HTML and paste it into the editor in source view.

Aside from the required variables, there are several others that can be used in your design to include other dynamic content. The full list of variables follows:

`@@Content`	*Required	Enter this where the page's main content (such as the survey form) ought to go.
`@@Footer`	*Required	Enter this where you want the standard footer the appear.
`@@List`	Optional	Creates a dropdown list of surveys to choose from.
`@@DepartmentName`	Optional	Gets the name of the current department.
`@@DepartmentUrl`	Optional	Links to the current department's index page.
`@@SurveyGroupName`	Optional	Gets the name of the current collection.
`@@SurveyGroupUrl`	Optional	Links to the current collection's main page.
`@@SurveyName`	Optional	Get's the current survey's name.

An example of using the above variables would be to create breadcrumbs as seen in the capture to the right. The breadcrumbs at the top of the page are created simply by adding the following to the HTML:

```
@@DepartmentUrl > @@SurveyGroupUrl > @@SurveyName
```

(The dropdown list was created by adding the **`@@List`** variable to the HTML.)

Follow these important guidelines for using variables:

- All layouts must include one `@@Content` and `one @@Footer` variable (and no more than one of each).
- If using the `@@List` variable, it must precede `@@Content` (and there must be no more than one `@@List` variable per layout).
- The `@@Content` variable must precede the `@@Footer` variable.
- The `@@List` option is not available for Department index pages.

UPLOAD HTML

If you upload HTML, you **MUST** wrap your content in `<BODY>` tags with **no attributes specified**. In other words if you use `<BODY onload="someFunction();">`, the layout will not be read. You can optionally add some `<HEAD>` information; but again, when uploading, the `HEAD` tag in the

uploaded HTML file must not have any attributes; otherwise it will be ignored.

When you upload HTML successfully, the HEAD information will be placed in the first TextArea below the upload control. The BODY (i.e., page content) will be placed in the Rich Text Editor. Note that the changes will not be committed until you have submitted the form.

RICH-TEXT EDITOR

To Edit the HTML using the Rich Text Editor, click on the toggle source button in the editor toolbar -

To Edit in Full screen mode, click the toggle full screen button in the editor toolbar-

PAGE ELEMENTS & STYLES

When creating a design it is important to pay special attention to Element ID's if, in fact, you assign ID's to your elements. Make sure that they do not conflict with any of the ID's of the dynamically created controls. Furthermore, if you add styles to the HEAD or reference a stylesheet, you will want to make sure that the class names do not conflict with existing styles in the default stylesheet (unless you want to override the style defined therein).

To review all the styles in the default stylesheet, click the Help icon and scroll to the bottom of the help page where the download link is given. An overview of predefined styles follows:

Style Name	Type	Level	Description
body	Standard	All	Body style
TABLE	Standard	All	Table style
TEXTAREA	Standard	All	Textarea (multiline textbox) formatting
a (Anchor)	Standard	All	Link style
PageTitle	Custom	All	Page Title Text (e.g. Survey Group Name for Surveys)
SubTitle	Custom	All	Subtitle Text (e.g. Survey Name for surveys)
SelectSurveyClass	Custom	Group/Survey	Title text for Survey dropdownlist
SurveyBulletHeader	Custom	Group	Bulleted list items (in list of available or unavailable surveys)
arrow	Custom	Group	Bulleted list of surveys (list tag)
IndexSectionHead	Custom	Index	Section Header
IndexSectionText	Custom	Index	Section Text (Survey Group description)
IndexLink	Custom	Index	Link to Surveys
InstructionTitle	Custom	Survey	Instruction Title (title is set in Web.Config, and appears whenever Instruction Text is specified for the survey)
InstructionText	Custom	Survey	Survey instructions (or any other text to appear at the top of the survey)
SectionName	Custom	Survey	Section Name
SectionDescription	Custom	Survey	Section Description Text
headstyle	Custom	Survey	Matrix Column Group Header
valueheader	Custom	Survey	Matrix column Header
tdstyle	Custom	Survey	Matrix row header
TextOnly	Custom	Survey	Question text for questions with NO responses
QuestionText	Custom	Survey	Question text for questions WITH responses (data entry controls)
Confirmation	Custom	Survey	Confirmation text formatting.

APPLYING LAYOUTS

To apply a layout to the Department's survey index page (which lists all available survey collections and their child surveys, select the desired layout from the **Index Layout** dropdown list on the `Department Manager` admin page. (If you are not logged in on with Master Admin account, navigate to this page by clicking on `Default Design` on the `Manage` tab's panel.)

To apply a layout to the Survey Group or Survey, navigate to the Survey Builder admin page, by clicking on the `Survey Builder` link on the `Build` tab's panel, select either the group or one of its child survey's, select the desired design from the **Group Layout** or **Page Layout** dropdown list, and update the resource.

The options in the respective dropdown lists will include the designs that were created specifically for the page type of the element being updated as well as any layout that was created as a Multi-purpose Layout. If any designs are available from the [Default] department for the respective page type, those layouts will also be listed along with your department-specific layouts.

DEPARTMENT LIST

When the index page is accessed without specifying a department, a list of all departments is presented with links that direct the user to the selected department's index. The department list page can be formatted with a page layout by specifying the default layout in the `Web.Config` file in the application's root directory.

The Web application's administrator can follow these steps to apply a layout to the department list:

1. Follow the instructions laid out in this section to create layout.
2. Open the `SQL Database` table `tbl_Designs` in the SQL Server Management console and find the record with the name supplied when creating the layout and note the `DesignId`.
3. Locate and open the `Web.Config` file found in the Web application's root directory.
4. Under the `Default Designs` comment in the `appSettings` section, locate and update the `MainIndexDesign` element with the appropriate `DesignId`.
5. Save the file.

Once completed, the layout should be applied to the department list.

Manage Sources

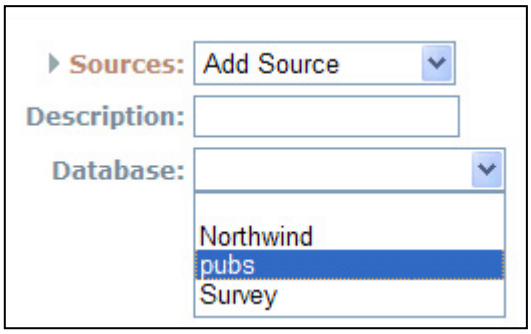
Many survey questions require the survey taker to respond by selecting an option from a radiobutton list, dropdown list, or checkbox list. Although *E-Data Collection* allows you to define the options via the administrative tool, some answer groups may be so large you might want to pull it from an existing table or view in a separate database. For instance, if the question is "What is your instructor's name?" the options may be pulled from a table named "Instructors" in the University database. This will then populate a dropdownlist. The `Manage Sources` screen is where you can specify such external sources. Access this screen by clicking on the `Source Manager` link on the `Build` tab's panel. Alternatively, once logged in, the URL is: http://localhost/EDCv4/admin/Sources.aspx.

There are three requirements, however, which determine whether a source may be added:

1. The database must exist on the same SQL server as the Survey database,
2. You must be able to connect to this database using the same username and password used to connect to the *Survey* database.
3. The table must have an identity column set as a unique, numeric key.

If a database table satisfies these conditions, it may be used as an "external source" for answer options.

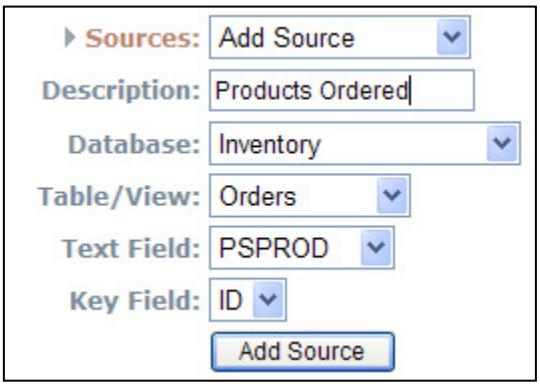
To add a source, enter a short description to identify it, and select a database from the dropdown list.



Once you select the appropriate database, the form will refresh with an additional field: **Table/View**. Select a table or view from the list and allow the page to refresh again, this time with an additional two fields: **Text Field** and **Key Field** dropdown lists.

The text field is the text that will populate the answer dropdown list for questions using this source. The key field ensures that each option has a unique identifier.

When you click `Add Source`, you will notice that the new source's description appears selected in the *Sources* dropdown list, and the button changes to `Update Source`.



In edit mode, you have an additional checkbox option to deactivate or activate the source.

Deactivating the source does two things:

1. Removes it from the available sources dropdown list in the `Option Manager` screen.
2. Removes the options from any questions where its assigned answer option group used it as a source to populate dropdown lists or radiobutton lists.

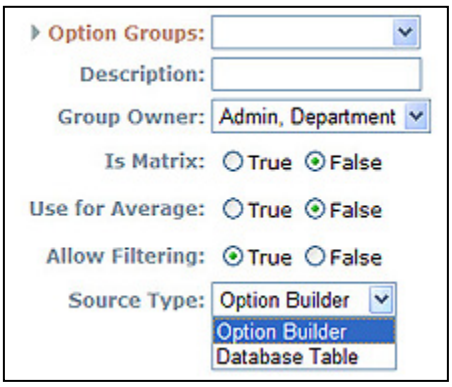
Once added, the source is available to the `Option Manager` screen (see the next section). Once you define an option group in the `Option Manager` as pulling from the added source, it becomes available to surveys.

It is important to note that you should never deactivate the source unless it is absolutely necessary. This action may produce undesirable results in the surveys that are associated with it, or lead to reporting errors or inaccuracies. Once created the source should be left alone. It should also be noted that sources added to *E-Data Collection* should be tables and views that will not be altered to any great extent. Adding data to these tables or views is acceptable, but deletions should not be performed as long as the survey system is utilizing the table or view.

Option Manager

Most survey questions require multiple choice answers rather than text responses. The options for a multiple choice question are grouped into `Answer Groups` containing predefined options. The groups are created and the options are defined in the administrative tool's `Option Manager` screen. Access this screen by clicking on the `Option Manager` link on the `Build` tab's panel. Alternatively, once logged in to the administrative tool, the URL is: http://localhost/EDCv4/admin/AnswerGroups.aspx.

As discussed in the previous section, *Answer Groups* can either pull their options directly from another *source* created in the Source Manager, or can have options stored in the E-Data Collection database. Either way, the group itself is managed from the Source Manager.



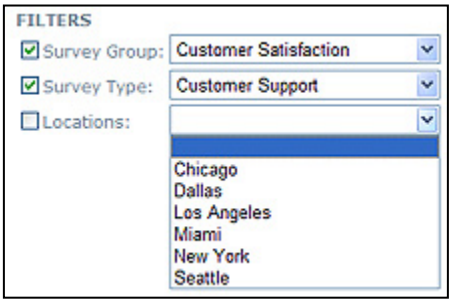
To create a new group enter a unique name for the group in the **Description** field.

You will notice that the **Group Owner** is listed in a dropdownlist. If, however, you only have *Survey Author* rights, the **Group Owner** is readonly.

When a group is created, the **Group Owner** is, by default, the creator. *Survey Publishers* and *Department Admin* may, however, select another user as the owner. When a *Survey Publisher* or *Department Admin* user changes the owner, he is essentially assigning the item of work to another user. It is not necessary to reassign to other *Department Admin* or *Survey Publishers* since these users are granted rights to edit any item for any survey, live or inactive, regardless of whether or not he owns the item.

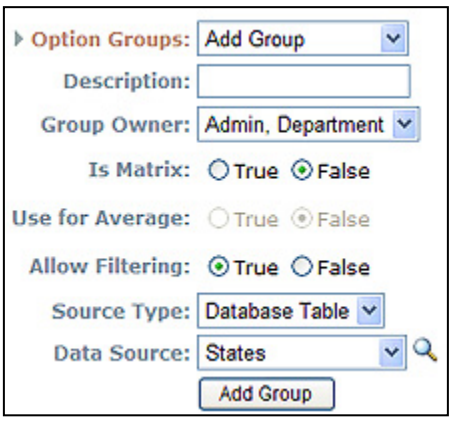
If this answer group will serve as an *Answer Matrix* to apply to entire survey sections, select *True* for the **Is Matrix** option. (We will soon discuss *Answer Matrices* in greater detail.)

Some groups should have a numeric value for each option. For instance, "Quality" should have a numeric rating so results can be averaged together. If the options for the group "Quality" are "poor", "fair", "good" and "excellent", "poor" may have a rating of 1 and "excellent" a rating of 4. When we run reports, we can then get an average of the responses. To make this possible, check the "True" radio button next to **Use for Average**.



The Data Analyzers allow for custom filters. In order to filter results generated by the analyzers on specific questions, the question must have a *Filter Alias* and at least one of its answer types must **Allow Filtering**. If the answer group should allow filtering (like the "Locations" answer group shown on the right), then select "True" for **Allow Filtering**. By default, "True" is selected.

If you are defining your own options, select "Option Builder" for **Source Type**. Otherwise, if you are pulling options from an external source, select "Database Table".

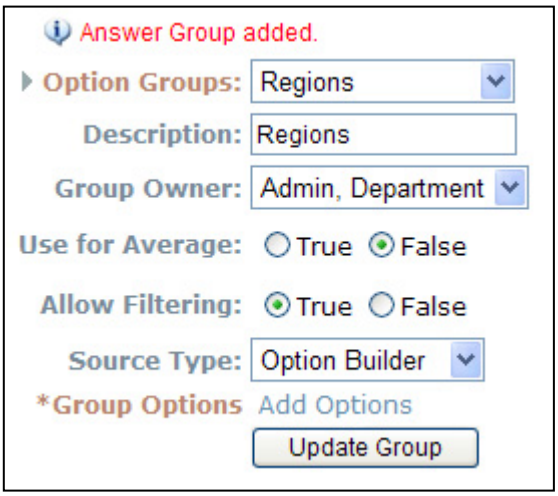


Note that external sources may not be used for averaging. When "Database Table" is selected, the form refreshes and **Use for Average** is disabled with "False" selected.

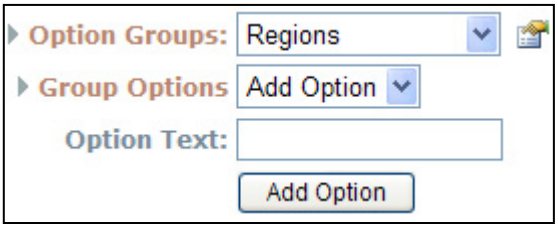
Also, after the form refreshes, the **Data Source** dropdown list appears populated with all the sources defined in the Source Manager from which you must choose. You may click the Preview icon to view the available options with the selected datasource to make sure it's the one you want.

Clicking the *Preview* icon will display a dropdownlist populated with the options from the data source.

When you click `Add Group`, you will notice that the new option group's description appears selected in the **Option Groups** dropdown list, and the button changes to `Update Group`. If your option group is pulling data from an external datasource, there is nothing more you need to do in order to start using the option group as question responses for your surveys. If however, you selected "Option Builder" from the **Source Type** dropdown list, you will need to specify the options to use. Notice that after you click the `Add Group` button, with "Option Builder" selected, you enter edit mode. In edit mode, you have the option to Add Options to the **Group Options**. Indeed, if you don't specify options, your new group serves no purpose.

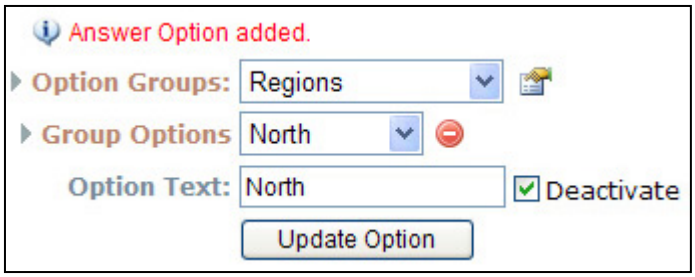


Click Add Options to add your first option. Simply enter the **Option Text**, and click the `Add Option` button. (Notice that the **Option Groups** form contracted to display the **Group Options** sub-form. To return to the **Option Groups** details, click the details button.



When you click the `Add Option` button, you will notice that the new option's description appears selected in the **Group Options** dropdown list, and the button changes to `Update Option`.

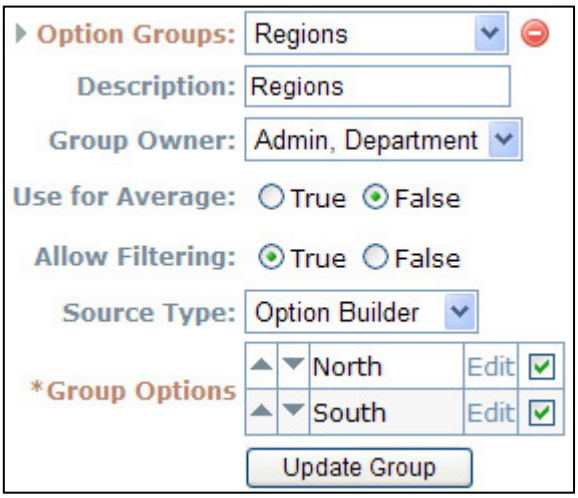
Also notice that a checkbox appears for deactivating and activating the option. When the option is deactivated (unchecked), the option is not included in the group wherever that group appears in a survey. However, if surveys were submitted while that option was active and survey takers selected that option as their response to questions, the reports generated by the analyzer will include those responses.



To add additional options, either select "Add Option" from the **Group Options** dropdown list or click on the **Group Options** caption and repeat the process for each option.

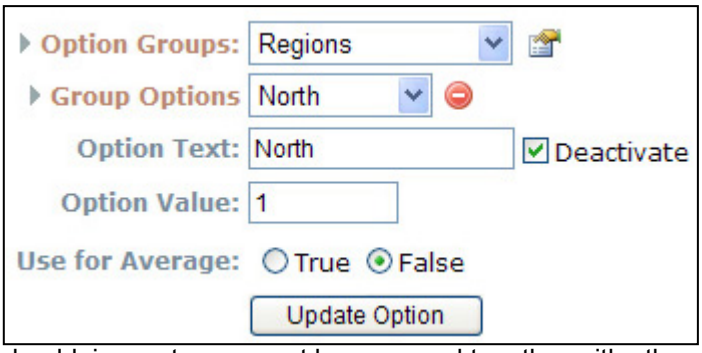
To delete an option, click on the delete icon (x). Note that when you delete an option, it completely removes it from the database; in other words, survey submissions received that had selected the deleted option will appear to have made no selection for that question. Therefore, if you want to remove an option from the list of options for future survey takers while retaining older submission records from past server takers who might have selected the option, you should disable the option rather than delete it.

Click on the details icon beside the **Option Groups** dropdown list to view the group's details again. Notice that once options have been added, they appear in a table. Using the arrows to the left of the options, you can reorder the options. The order in which the options appear here determines the order in which they will appear in the dropdownlists or radiobuttonlists. You are also able to quickly activate or deactivate individual options by checking or unchecking the checkboxes to the right of the options. Also, *Survey Publishers* and *Department Admin* users have the option to delete the selected **Option Group**. Care should be taken when deleting any survey element (particularly if the survey is active), however, if the group is associated with surveys or other answer matrices, you will be notified when clicking the delete button. After being warned of relationships, you can then opt to click the delete button again to permanently delete the group and all its associations.



If you had selected the "True" radiobutton option for **Use for Average**, you would have been presented with two additional fields in the add/edit **Group Options** form.

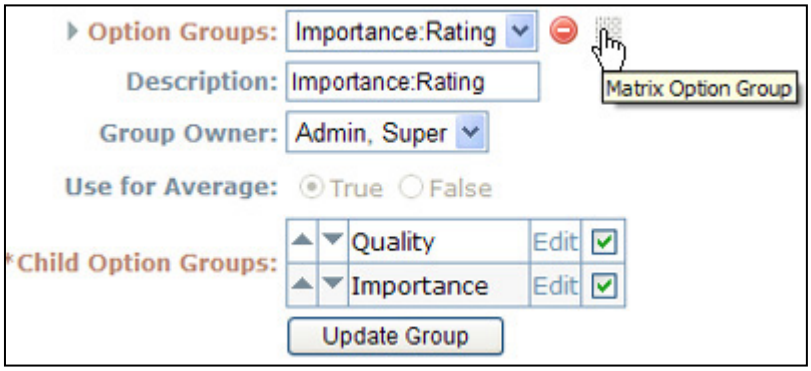
Returning to edit mode for individual options, if you had selected **Use for Average**, you would see the form to the right, with two additional fields:



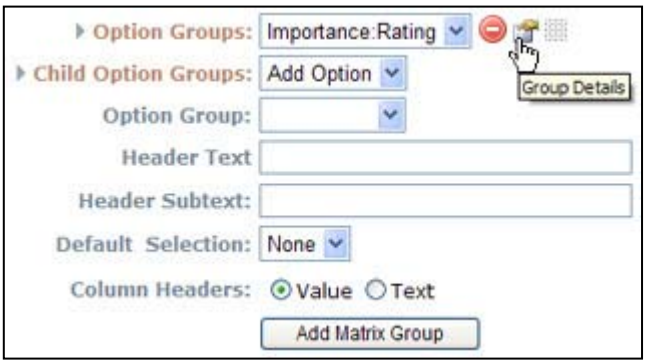
Option Value, which is the numeric value for the option; and, **Use for Average**, which determines whether or not to factor this option into the overall average when survey takers select this option. For example, the option "N/A" with a numeric value of 0 should, in most cases, not be averaged together with other responses.

Once you have added and ordered your options using the `Option Manager`, you are ready to proceed to build your surveys.

Additionally, once you have created at least one answer group that is used for averaging, you can create *Answer Matrices* by selecting the **Is Matrix** option when creating the group. Once you add the matrix answer group, you are presented with the form on the right. You will notice that after you create an answer group you *may not* change its matrix setting. If the group is an answer matrix, the matrix icon will appear beside the option groups dropdown list. Also, all matrices are *Used for Averaging*. *Answer Matrices* are simply collections of other option groups. Click on the **Child Option Groups** caption to add option groups to the answer matrix.



When you add a new option group to the matrix, the form on the right loads. Select the option group from the **Option Group** dropdownlist. The page will refresh. Enter the **Header Text** which you want to appear at the top of the matrix describing this option group. Optionally, you may add **Header Subtext** as well. *Subtext* is useful for explaining the rating system. In the "Importance" option group, for example, 1 = "Least Important" and 4 = "Most Important". If you want to select a certain option by default, select the option in the **Default Selection** dropdownlist. The header for each column in the matrix may use either the option value or the option text. Use the values if the text for certain options in the group is too long to look presentable in the matrix grid. *Value* is selected for **Column Headers** by default. Click on the *Group Details* icon to return to the details page. The *Child Option Group* will appear in a grid. You can reorder how the option groups appear in the matrix using the up and down arrows in the grid. The highest group appears on the left and the lowest appears on the right. If you wish to deactivate an option group, uncheck its checkbox.



Note: *Survey Authors* may add new *option groups* and edit *Option Groups* that they own as long as the group is not used in a *published* survey or used by surveys owned by other administrators. *Survey Publishers* and *Department Admin*, on the other hand, can modify *Option Groups* regardless of their relations to surveys or other users.

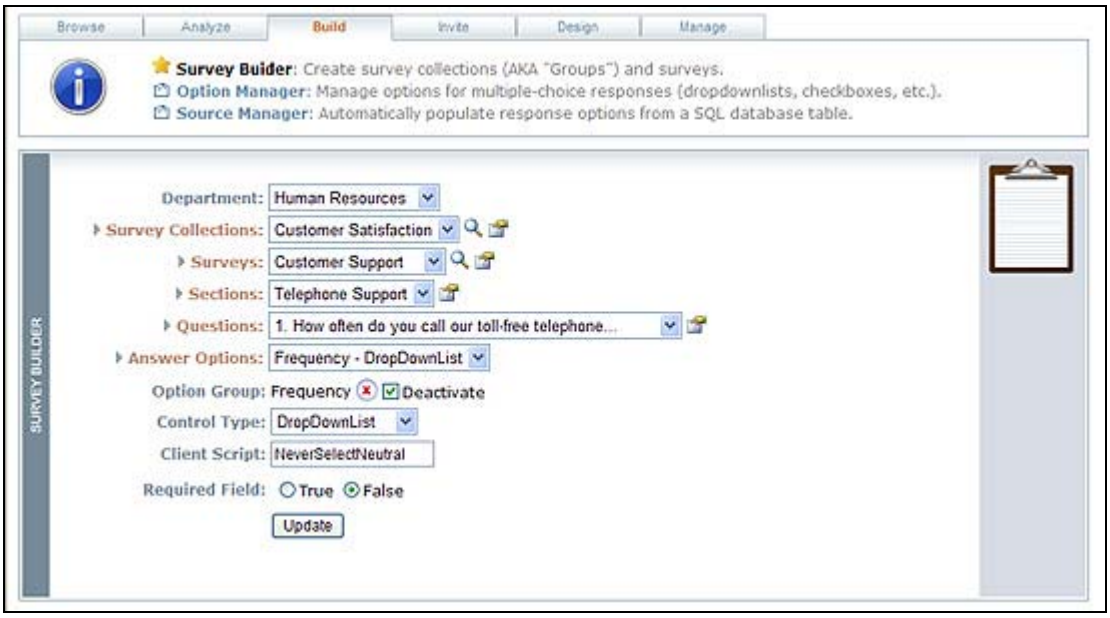
Survey Builder

Assuming you have read the foregoing sections, you are now familiar with the form navigation and with what each icon indicates. Therefore, we will now focus on the `Survey Builder` screen and what each field represents rather than focus on form navigation.

Access this screen by clicking on the `Survey Builder` link on the `Builder` tab's panel. Alternatively, once you have logged in, the URL is:
http://localhost/EDCv4/admin/SurveyBuilder.aspx

In the previous section (`Option Manager`), you saw how the **Option Groups** form contracted when the next level, **Group Options**, was selected, and you then navigated back to **Option Groups**. The same concept applies to `Survey Builder`; the only difference being that while `Option Manager` consisted of only two levels – or two forms – **Option Groups** and **Group Options**, `Survey Builder` consists of five.

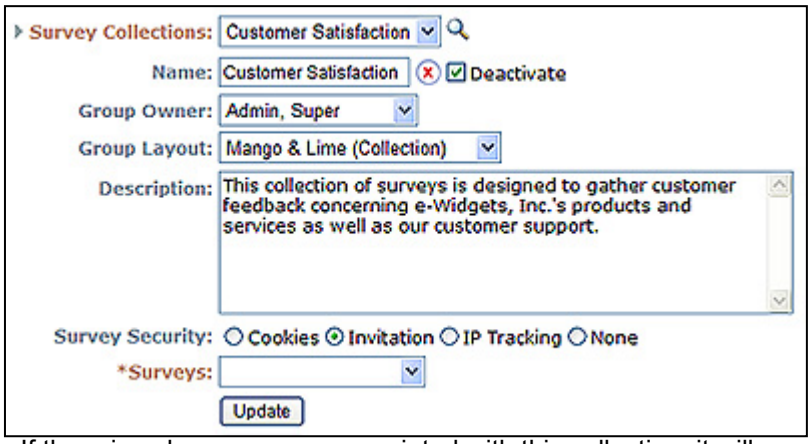
The screenshot to the below displays the lowest level form, **Answer Options**, but at the same time all preceding levels (and forms) can be accessed either to edit or add new items. It is worth repeating here, however, that you must remember to save the changes you made at the current level (by clicking the `Update` button) before returning to another level (or form).



The five levels, from highest to lowest, are as follows: **Survey Collections**, **Surveys**, **Sections**, **Questions**, and **Answer Options**.

As mentioned, the remainder of this section will focus on the input fields and options available to each level, and the effect they have on surveys and reports. Furthermore, we will look at the sample surveys included in the database as an example.

SURVEY COLLECTION


Survey Collections: Customer Satisfaction
Name: Customer Satisfaction Deactivate
Group Owner: Admin, Super
Group Layout: Mango & Lime (Collection)
Description: This collection of surveys is designed to gather customer feedback concerning e-Widgets, Inc.'s products and services as well as our customer support.
Survey Security: Cookies Invitation IP Tracking None
*Surveys:
Update

Survey Collections: Select a survey collection from the dropdownlist, or select "Add Collection" to create a new one. (You may also click on the **Survey Collections** caption to add a new collection.)

**Preview:* When the preview icon is clicked, a new browser window opens with a message asking you to select a survey. If there is only one survey associated with this collection, it will automatically load the survey. If there are no surveys associated with the collection, a message will inform you there are no available surveys in the collection.

Note that when a logged in administrator (*Department Admin, Publisher or Author*) previews surveys, he is viewing the survey and the entire survey collection as if the collection and all surveys associated with it were published.

A survey must meet the following criteria to be published:

1. It's collection must be "Activated" (The collection's activation checkbox is checked.)
2. The survey itself must be "Activated" (The survey's activation checkbox is checked.)

3. The survey has either no dates specified in its **Active Date** range or the current date is within the specified **Active Date** range. (See the "Survey" section below.)

Survey collections and surveys that are not published, may only be viewed by logged in administrators. When an administer is logged in, previews the survey, and submits it, the responses he supplies are considered test data and will not be mixed in with real data supplied by anonymous users.

Name*:* This is the title of the *Survey Collection*. It appears at the top of the survey and also in the *Survey Index*, which lists all active surveys. (If, however, there is only one active survey in the collection, when the survey is loaded the Survey Collection *Name* will be ignored, and only the Survey *Name* will appear as the title.

☑ `Deactivate`*:* If a collection is deactivated (the checkbox is unchecked) it is not published, and none of its child surveys are published. A deactivated (unchecked) survey collection will not appear in the `Survey Index`, and when someone attempts to access the survey collection or one of its child surveys, he will encounter an error message stating that the requested surveys are not available. Reports, however, can still be generated on surveys that have been deactivated or whose survey collection has been deactivated. In fact, any item, whether it's a survey, section, or question, which is deactivated, will still appear in generated reports; however when an item is deleted, that item and all child items (including submission responses) are permanently removed from the database. Note also that only *Survey Publishers* and *Department Admin* users may deactivate a collection.

`Delete`*:* When a *Survey Collection* is deleted, all its child surveys, sections, questions and submission results are also permanently deleted as well. Note also that only *Survey Publishers* and *Department Admin* users may delete a collection.

Warning: It is important to note the delete function is included (here and elsewhere) in order to facilitate deletions of outdated collections which will never be accessed again; however, utmost care should be taken when deleting anything!

Group Owner*:* You will notice that the *Group Owner* is listed in a dropdown list. If, however, you only have *Survey Author* rights, the *Group Owner* is readonly.

When a *Survey Collection* is created, the *Group Owner* is, by default, the creator. *Survey Publishers* and *Department Admin* may, however, select another user as the owner. When a *Survey Publisher* or *Department Admin* user changes the owner, he is essentially assigning the item of work (in this case a survey collection) to another user. It is not necessary to reassign to other *Department Admin* or *Survey Publishers* since these users are granted rights to edit any item for any survey, live or inactive, regardless of whether or not he owns the item.

Description*:* An optional description explaining the purpose of the survey collection. This description appears on the `Survey Index` page and on the `Survey` page (prior to selecting a specific survey from the dropdown list).

Survey Security*:* The available options here are "Cookies", "Invitation", "IP Tracking", and "None". In most cases, you will not want the survey taker to submit a single survey more than once, and in some cases you will only want specific users to submit the survey.

- Cookies: When selected, a cookie on the client machine will keep track of the surveys taken from that machine. However, often a family will log onto their computer under the same local user account. If you anticipate more than one family member, for instance, taking the survey you might consider selecting one of the other options.

- Invitation: When selected, only users who receive e-mail invitations may take the surveys in the survey collection. And each invitee may only take each survey one time. The invitees are identified by a unique URL which they receive in the email. The disadvantage of this method of security, however, is that you must know the email address of each user you want to take the survey. Note that e-mail invitations and reminders may be sent regardless of the security mode.

- IP Tracking: When selected, the system will keep track of the surveys taken from the client's IP address and will disallow duplicate submissions from a single IP address

- None: When selected, no security applies to the surveys in the collection. Any user can take the survey multiple times.

Note that when an administrator logs onto the E-Data Collection Admin Tool, and previews and submits surveys for testing purposes, the security mode does not apply to logged in administrators.

Also note that if an invitee takes a survey using the URL sent to him, his submission status is recorded regardless of the mode of security.

Surveys: Selecting a survey or "Add Survey" from this dropdown list will contract the **Survey Collections** form. (You may also click on the **Survey** caption to add a new survey.) If an existing survey is selected, the details form will appear in edit mode; if "Add Survey" is selected, a blank details form will open in add mode. Remember to save any changes to the **Survey Collection** by clicking the `Update` button before navigating to the **Surveys** form.

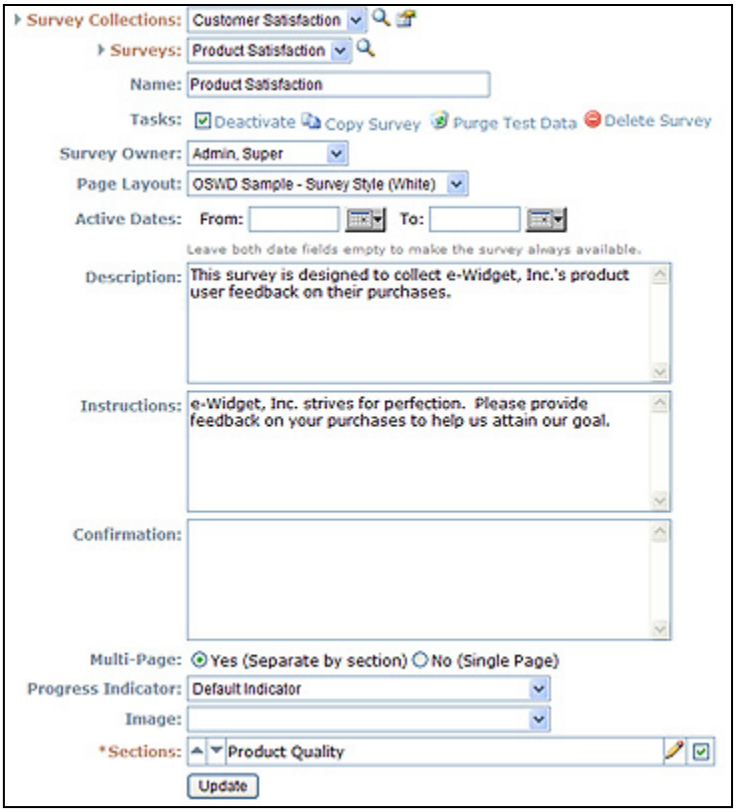
SURVEYS

Preview icon: When the preview icon beside the **Surveys** dropdown list is clicked, a new browser window opens up and loads the selected survey.

Note that when a logged in administrator (*Department Admin, Publisher or Author*) previews surveys, he is viewing the survey and the entire survey collection as if the survey was published (whether or not it is in fact published).

A survey must meet the following criteria to be published:

1. Its collection must be "Activated" (The collection's activation checkbox is checked.)
2. The survey itself must be "Activated" (The survey's activation checkbox is checked.)
3. The survey has either no


Survey Collections: Customer Satisfaction
Surveys: Product Satisfaction
Name: Product Satisfaction
Tasks: Deactivate Copy Survey Purge Test Data Delete Survey
Survey Owner: Admin, Super
Page Layout: OSWD Sample - Survey Style (White)
Active Dates: From: To:
Leave both date fields empty to make the survey always available.
Description: This survey is designed to collect e-Widget, Inc.'s product user feedback on their purchases.
Instructions: e-Widget, Inc. strives for perfection. Please provide feedback on your purchases to help us attain our goal.
Confirmation:
Multi-Page: Yes (Separate by section) No (Single Page)
Progress Indicator: Default Indicator
Image:
*Sections: Product Quality
Update

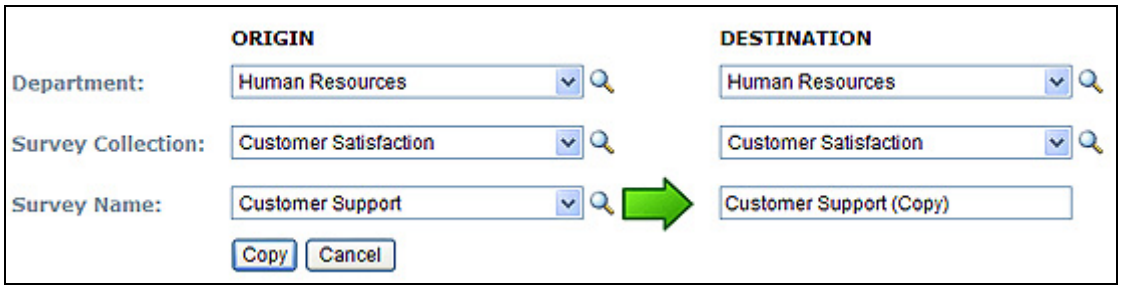
dates specified in its *Active Date* range or the current date is within the specified *Active Date* range.. (See *Active Dates* below).

Name: This is the title of the selected *Survey*. It appears at the top of the survey (below the *Survey Collection* title) and also in the *Survey Index*, which lists all active surveys.

Deactivate: A deactivated (unchecked) survey is not published. It will not appear in the *Survey Index* and will not be an accessible survey to non-administrative users. When the user attempts to load a deactivated survey in the browser he will either receive an error message stating that the selected survey is no longer available or, if there is one other active survey in the collection, will be redirected to the active survey. If there are multiple active surveys in the collection, the user will be redirected to the *Survey Collection* page where he may choose one of the active surveys, but not the deactivated survey. To preview the load behavior of a deactivated, or unpublished survey, log out of the administrative tool and try to access it.

The deactivate checkbox setting overrides the **Active Date** range settings discussed below. Note also that only *Survey Publishers* and *Department Admin* users may activate (publish) or deactivate a survey. When an *author* creates a survey, it is not active and it will remain inactive as long as a *publisher* or *Department Admin* user does not activate it.

Copy: Click the copy link or icon to go to the copy page (see screenshot below). You must specify the origin and destination. Select the *department*, *survey collection* and *survey* to be copied from the dropdownlists on the left side of the page, and select the destination *department* and *survey collection*, and enter a unique name for the new *survey* on the right side of the page. Click the Copy button to create the new survey and enter edit mode. (Note that the screenshot below is viewed from the perspective of a *Super Admin* user.)



You will notice that you are also able to preview department index pages, survey collection pages, and surveys directly from this admin screen in order to ensure that you are copying the correct survey into the correct survey collection.

Delete: When a *Survey* is deleted, all its child sections, questions and submission results are also deleted. (Note the warning in *Survey Collections* above). Note also that only *Survey Publishers* and *Department Admin* users may delete a survey.

Purge Test Data: Clicking the recycle bin button purges all test data for the selected survey. When a logged in administrator (*Department Admin, Publisher, or Author*) submits a survey from the preview, the submission is flagged as test data. The administrator can then generate (demo) reports on that test data. When he or she is done testing the survey, the test data should be purged. Only *Survey Publishers* and *Department Admin* users may purge the test data for a survey.

Survey Owner*:* You will notice that the *Survey Owner* is listed in a dropdownlist. If, however, you only have *Survey Author* rights, the *Survey Owner* is readonly.

When a *Survey* is created, the *Survey Owner* is, by default, the creator. *Survey Publishers* and *Department Admin* may, however, select another user as the owner. When a *Survey Publisher* or *Department Admin* user changes the owner, he is essentially assigning the item of work (in this case a survey) to another user. It is not necessary to reassign to other *Department Admin* or *Survey Publishers* since these users are granted rights to edit any item for any survey, live or inactive, regardless of whether or not he owns the item.

Description*:* A description explaining the purpose of the selected survey. It appears in the *Survey Index.*

Active Dates*:* Click on the `From` or `To` textbox buttons to open the calendar pop-up control. Select the date range for which the selected survey should be active. Although you can deactivate a survey by simply unchecking the `Deactivate` checkbox on the day that it should become inactive, the publisher may forget. The surveys will always be available as long as the date range is not specified and the `Deactivate` checkbox is checked. It is also possible to specify just one of the dates (`From` or `To`). If only `From` is specified (the begin date), the survey will become available on the date specified and will run indefinitely. Prior to that date, it will not be available. If, on the other hand, only the `To` date is specified (the end date), the survey will remain available from the present until the date specified. `Deactivating` a survey or survey collection overrides the `Active Dates` *settings.*

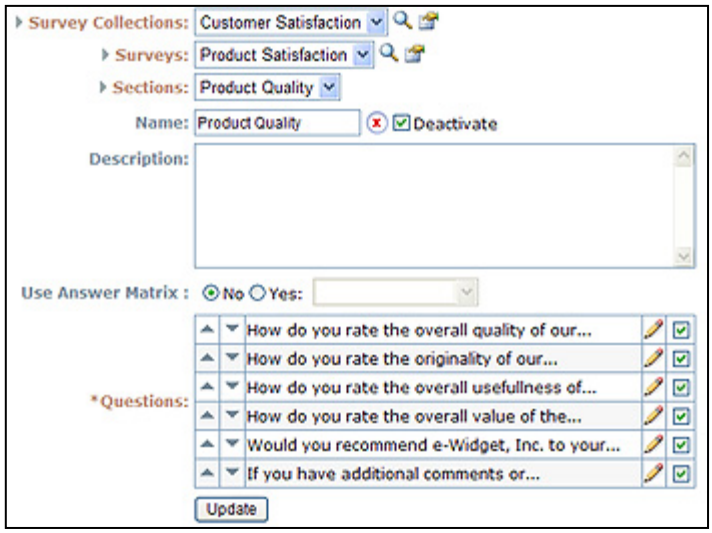
Instructions*:* This is text that appears at the top of the survey, just beneath the survey title.

Confirmation*:* This is text that appears as confirmation when the form is submitted successfully. If left blank, the default confirmation message will be used. (The default confirmation message is set in the `Web.Config` file in the application's root directory; update the `ConfirmationMessage` application setting to change the default.)

Image*:* If desired, select an image to appear in the upper-right side (under the survey title and to the right of the *Instructions*) of the survey form. Images are uploaded via the `Logo Manager` screen. Once you select an image, you can preview it by clicking the preview icon beside the **Image** dropdown list.

Sections*:* If sections have already been created for the selected survey, they will appear in a table (as shown in the previous screenshot). If there are multiple sections created for the survey, you can use the up and down arrow button to reorder them. Once the arrow buttons are clicked the new order is automatically committed (i.e., it is not necessary to click the `Update` button, as long other changes haven't been made to the `Survey` form). To deactivate a section, uncheck the corresponding checkbox. To activate a section, check the corresponding checkbox. Again it is unnecessary to click the `Update` button when activating or deactivating sections in the table, as long other changes haven't been made to the `Survey` form. To drill down to the `Sections` form, and contract the `Surveys` form do one of the following: If you want to edit a section, click the pencil icon (edit icon) beside the `Section` you want to edit; or, to add a new section, click the **Sections** caption link. Note that if no sections have yet been created for the selected survey, your only option is the latter.

SECTIONS


Survey Collections: Customer Satisfaction
Surveys: Product Satisfaction
Sections: Product Quality
Name: Product Quality
Deactivate
Description:
Use Answer Matrix : No Yes:
*Questions:
How do you rate the overall quality of our...
How do you rate the originality of our...
How do you rate the overall usefullness of...
How do you rate the overall value of the...
Would you recommend e-Widget, Inc. to your...
If you have additional comments or...
Update

Name: This is the title of the selected *Section*. It appears as the Section header.

`Deactivate`: A deactivated (unchecked) section will not appear in the survey, nor will its child questions. If the survey was submitted while the section was active, the results will still appear in the generated reports though the section no longer appears in surveys currently viewed and submitted by survey takers.

`Delete`: When a *Section* is deleted, all its child questions and submission results are also deleted. Note the warning in *Survey Collections* above. Note also that only *Survey Publishers* and *Department Admin* users may delete a section.

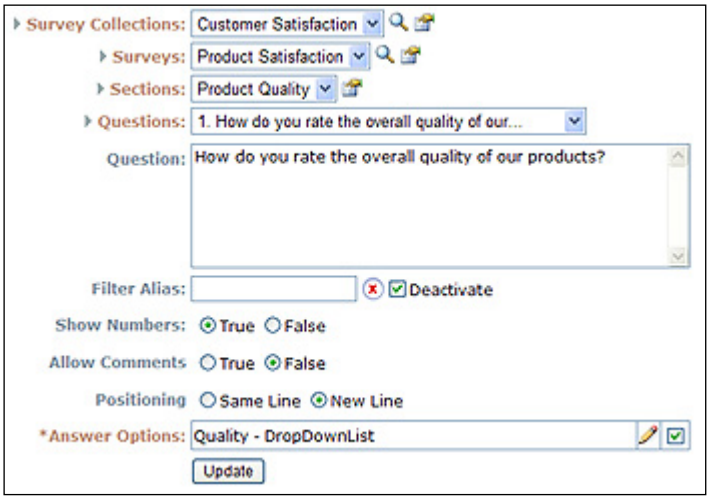
Description: An optional description explaining the purpose of the section. This description appears above the group questions.

Use Answer Matrix: If this section should implement an answer matrix, select "Yes" for **Use Answer Matrix**, and select the answer matrix to use from the dropdownlist. If selected, you will not be asked to specify answer groups for each of the questions in the section, since the matrix applies to all questions within the section.

Questions: If questions have already been created for the selected section, they appear in a table (as shown in the figure above). If there are multiple questions created for this section (as there should be), you can use the up and down arrow buttons to reorder them. Once the arrow buttons are clicked the new order is automatically saved (i.e., it is not necessary to click the `Update` button as long other changes haven't been made to the *Section* form). To deactivate a question, uncheck the corresponding checkbox. To activate a question, check the corresponding checkbox. Again it is unnecessary to click the `Update` button when activating or deactivating questions in the table as long other changes haven't been made to the *Section* form. To drill down to the **Questions** form, thereby contracting the **Sections**, form do one of the following: If you want to edit a question, click the pencil icon (edit icon) beside the *Question* you want to edit; or, to add a new question, simply click the **Questions** caption link. Note that if no questions have previously been created for the selected section, your only option is the latter.

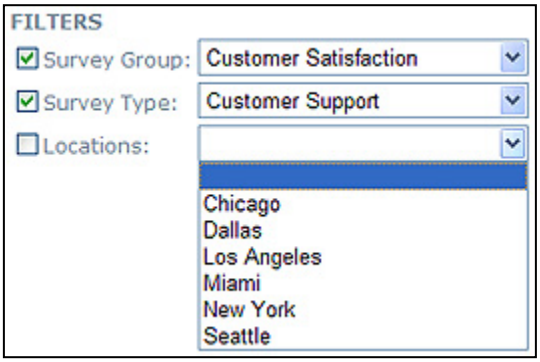
QUESTIONS

Question: Enter the text of the question as you want it to appear on the survey within the selected section.


Survey Collections: Customer Satisfaction
Surveys: Product Satisfaction
Sections: Product Quality
Questions: 1. How do you rate the overall quality of our...
Question: How do you rate the overall quality of our products?
Filter Alias:
Deactivate
Show Numbers: True False
Allow Comments True False
Positioning Same Line New Line
*Answer Options: Quality - DropDownList
Update

☑ `Deactivate`: A deactivated (unchecked) question will not appear in the section on the survey form. If the survey was submitted while the question was active, the results will still appear in the generated reports though the question no longer appears in surveys currently viewed and submitted by survey takers.

`Delete`: When a question is deleted, all submission results pertaining to that question are also deleted. (See the warning in *Survey Collections* above). Note also that only *Survey Publishers* and *Department Admin* users have permission to delete a question.



Filter Alias: When generating reports in the `Analyzer`, the survey collection and survey must be selected (as seen in the screenshot to the right). In addition to this, though, the `Survey Builder` allows you to define additional criteria for narrowing the results in the `Analyzer` based on user input. For instance, if you have a question on the survey asking what store location the survey taker usually shops at, the survey administrator may specify "Location" as a filter to display results for a specific location. This is done in the `Survey Builder` at the question level. In order to make the filter appear in the report filters form (from which reports are generated), simply provide an alias for the filter in the **Filter Alias** field. If the question uses an appropriate answer option group assigned to it which *allows filtering*, the filter will appear on the filters form with the alias as its filter label. The two types of answer option groups that can be used as filters are: (1) options from external sources, and (2) options created with option builder. In other words, results cannot be filtered on text input fields.

Show Numbers: When "True" is selected, the question will be numbered. "True" is the default. (This option is not available for questions in sections that implement answer matrices.)

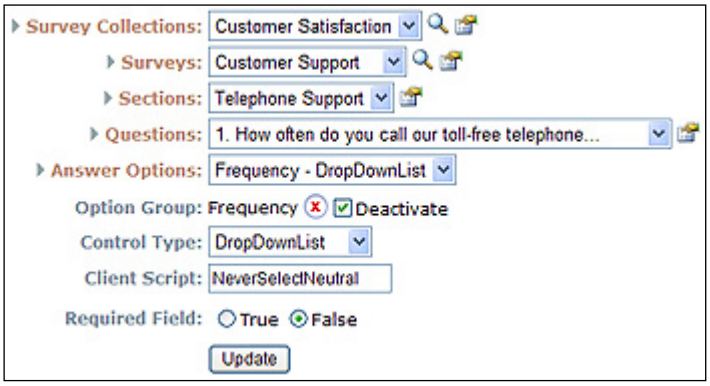
Allow Comments: When "True" is selected, an optional comments box will appear under the question. The comments box is not a required field when present on the survey form. By default, "False" is selected. (This option is not available for questions in sections that implement answer matrices.)

Positioning: Answer options can be positioned either on the *same line* as (and to the right of) the question or on a *new line* (flushed left). "Same Line" is the default. (This option is not available for questions in sections that implement answer matrices.)

Answer Options: If option groups have already been assigned to the selected question, they appear in a table. To deactivate an answer option group, uncheck the corresponding checkbox. To activate an answer option group, check the corresponding checkbox. It is unnecessary to

click the `Update` button when activating or deactivating answer option groups in the table as long other changes haven't been made to the *Question* form. To drill down to the **Answer Options** form, and contract the **Questions** form do one of the following: If you want to edit an answer option group, click the edit icon (pencil) beside the answer option group you want to edit; or, to add a new answer option group, click the **Answer Options** caption link. Note that if no answer option groups have yet been created for the selected section, your only option is the latter. (The *answer option* feature is not available for questions in sections that implement answer matrices.)

ANSWER OPTIONS


Survey Collections: Customer Satisfaction
Surveys: Customer Support
Sections: Telephone Support
Questions: 1. How often do you call our toll-free telephone...
Answer Options: Frequency - DropDownList
Option Group: Frequency Deactivate
Control Type: DropDownList
Client Script: NeverSelectNeutral
Required Field: True False
Update

Option Group*:* Each question may have multiple answer groups assigned to it. For instance, the question, "*What is the city and state in which you reside*" may have two fields – one text field for the city and one dropdown list with the state codes. There is, however, one limitation: there can be but one of each option group type. Therefore, two "Frequency" option groups are not allowed. Also, note that you may select a text input, which is also considered an option group. However, each question may only have a single text input assigned to it.

☑ `Deactivate`*:* A deactivated (unchecked) option group will not appear as a response type for the selected question on the survey form. If the survey was submitted while the option group was active, the results will still appear in the generated reports though the option group no longer appears in surveys currently viewed and submitted by survey takers.

Control Type*:* When *Text Input* is selected for **Option Group**, the available **Control Types** are:

- Date Control – a textbox that verifies the data entered is a valid date, and when clicked, the date control pop-up appears to allow the user to easily select a date.
- Email Control – a textbox that verifies that the data entered is a valid email address (i.e., formatted correctly)
- Multiline text box – for questions that elicit longer responses than just a couple words.
- Textbox – the standard single line text box (about an inch and a half in length)

When any other *Option Group* is selected, the available *Control Types* are "DropDownList", "CheckBoxList" and "RadioButtonList". CheckBoxes allow for multiple responses from a single submission while RadioButtons and Dropdown Lists allow for single selections only.

Note that there are two date controls from which to choose. This selection is a global setting and therefore is set for all surveys and all date controls in the admin pages. This setting is therefore specified once in the Web.config file. One calendar control uses a popup (dialog window), while the other uses DHTML (a layer on the same page). Many will find the latter preferable to the former; however, it should only be utilized if you know your users will be using the latest browsers (IE 7.x, Firefox 2.x or Opera 9.x – these are the latest browsers at the time of this writing). There is a known issue with DHTML layers in legacy browsers insofar as dropdown lists always appear on top of other layers. Thus, if your users utilize legacy browsers, you can set the application setting `CalendarPopup` in the web.config file to either "true" or "auto" – "true" will always serve up the popup calendar, whereas "auto" will force the application to try to determine the best calendar control for the user's browser. The default is "auto".

Vertical Direction (not pictured above): If "RadioButtonList" or "CheckBoxList" is selected in the **Control Type** dropdown list, the direction can be formatted to display options vertically or horizontally. If this checkbox is left unchecked, the radiobutton list will appear in a horizontal direction on the survey form.

Client Script: NOTE: This feature requires knowledge of JavaScript and requires access to the server to upload JavaScript files.

You may add custom JavaScript to the *Option Group* controls. For textboxes, and radiobuttonlists, you may add the script to their onclick events. For dropdown lists, you may add the script to the onchange event. The sample surveys included in the database contain an example of how to use this functionality. All custom JavaScript functions must receive two parameters: the source element ID, and a reference to the source element (i.e., the control itself). To use the example in the sample database, the HTML produced for the control event appears like this:

…onclick="NeverSelectNeutral('rptSections__ctl0_UcSectionQuestions1_dgSectionQuestions__ctl2', window.event.srcElement);"

The custom JavaScript function "NeverSelectNeutral" says that if the answer to "*How often do you call our toll-free telephone support line?*" is "Never", then select "Neutral" as the response to all the questions concerning the customer's feeling about the toll-free support line.

The custom function follows:

```
// the following is sample javascript called from a drop down list
function NeverSelectNeutral(id, val) {
     if(val.value=='27') {
         for(i=0; i < document.Form1.elements.length; i++) {
            // compare with this control
            compareId = document.Form1.elements[i].name;
            if(compareId != undefined) {
                if ((compareId.indexOf('rptSections:_ctl0:UcSectionQuestions1') > -1)
                 && (compareId.indexOf('ddl') > -1) &&
                (compareId != id)) {
                  var breakout = false;
                  for (x=0; x < document.Form1.elements[compareId].options.length; x++) {
                     if ((breakout == false) && (document.Form1.elements[compareId].options[x].value ==
                       '21')) {
                       document.Form1.elements[compareId].selectedIndex = x;
                       f_breakout = true;
                      }
                  }
              }
            }
         }
    }
}
```

This function must be added to a JavaScript file named a certain way and added to the `ClientScripts` directory in the application's root directory. The file naming convention is "`JS`" + SurveyID + "`.js`". Thus if the survey that will use the function has an ID of "5", the filename must be "`JS5.js`" and must be added to the `ClientScripts` folder. You can determine the ID of the survey by looking at the `SID` querystring in the URL for the survey.

To fire the control's custom function, enter only the name of the function in the **Client Script** textbox in the *Answer Options* form.

Required Field: By default, input fields are required; i.e., if the survey taker attempts to submit the survey without providing a response, a message will alert the user that not all required fields have been filled out, and a red asterisk will appear beside the incomplete required field(s). Check "False" if the *Answer Option* group or textbox is an optional field.

Important: When generating reports, you have the option to view *Section Averages*. Suppose a section named "*In-Store Service*" contains four questions requiring a response from the "*Quality"*

optional group (consisting of the options "*Poor*", "*Fair*", "*Good*", and "*Excellent*" with numeric values of 1, 2, 3, and 4, respectively). The survey taker will rate the sales representatives on various points. Because the questions are logically grouped together into a single section, we can now get meaningful reports with section averages; i.e., we can get an overall average rating for the sales reps.

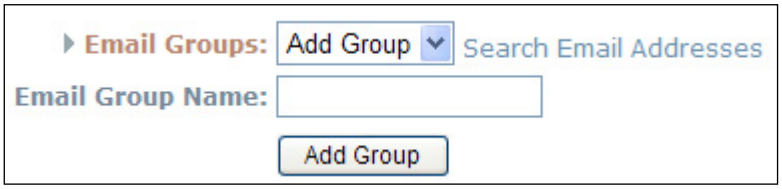
However, if there is a fifth question in the section that has a different *Answer Group* with a numeric value assigned to it, for instance, "*Frequency*", instead of "*Quality*", the results might become confusing. There will now be two overall averages for the "*In-store Service*" section, one averaging "*Frequency*" responses, and the other averaging "*Quality*" responses. For this reason, it is recommended that when designing surveys, you try to use only one *Answer Group* that is *Used for Averaging* (i.e., whose options have numeric values). This will ensure more meaningful, more intuitive reports.

Email Groups

Before you can send e-mail invitations, you must first add all the e-mail addresses to which you want to send e-mails. E-mail addresses are associated with e-mail groups – which are, essentially, distribution lists. All you need is a comma-delimited list of e-mail addresses and you can conveniently enter all email addresses in one fell-swoop.

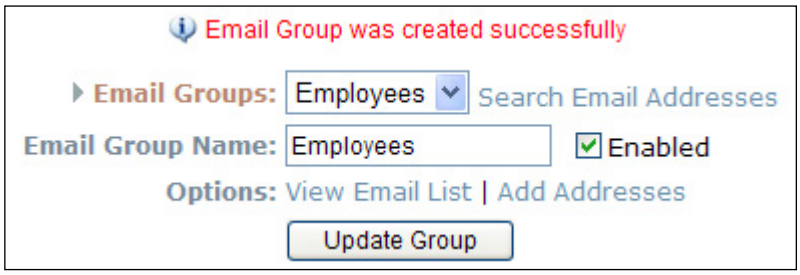
Log in as a *Publisher* or *Department Admin* and click on the `Email Groups` link on the `Invite` tab's panel to access the email groups screen.

Simply enter a unique `Email Group Name` and click the `Add Group` button.



The form enters update mode with the newly created group selected in the **Email Groups** dropdownlist.

The `Enabled` option is checked by default. Uncheck the checkbox to deactivate this group. Deactivated groups are not sent e-mail invitations or reminders even when they are associated with the survey collection. In update mode, you have two other **Options**: View Email List and Add Addresses.



Click Add Addresses to associate e-mail addresses with the selected group. If you have a large list of email addresses to add to the group you may want to copy a comma-delimited list and paste it into the box provided. Click the `Add Email Addresses` button to associate the addresses with the group. Duplicate e-mail addresses are not added to the group. All other e-mail addresses are added to the group and removed from the textbox.

Could not create duplicate entries for 2 addresses. The email addresses remaining in the textbox below are those which could not be added.
Successfully added 3 new addresses.
Email Groups:
Employees
Search Email Addresses
Options: View Email List | Add Addresses
Add Addresses: (comma delimitted)
one@two.com, two@three.com
Add Email Addresses

Click View Email List to view all e-mail addresses associated with the group.

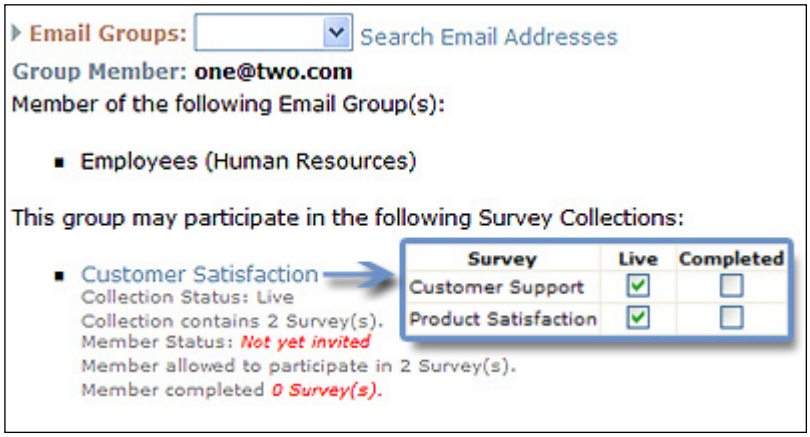
You'll notice that the last screenshot showed that two e-mail addresses could not be added to the e-mail group because it would have caused duplications. As shown by the screenshot on the right, one@two.com was, in fact, already added to the group.

The table of e-mail addresses shows ten addresses at a time. To view more results click on the page number at the bottom of the table. You may remove an e-mail address from the group. However, this action will not delete any survey responses that the user might have already submitted while associated with the group. You may also deactivate a user in a group by unchecking the `Enabled` checkbox.

Search for a specific e-mail address by entering all or part of the e-mail address in the `Filter` textbox and clicking the `Submit` button.

Sort the e-mail addresses by clicking on the `Email Address` caption in the table header.

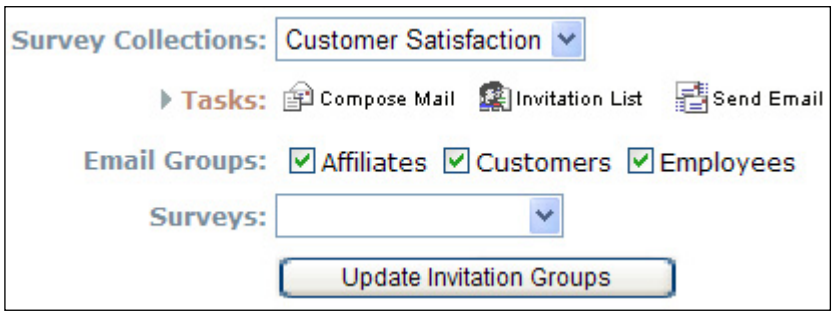
To view details for a specific e-mail address, click the address in the table. The e-mail groups in which the account holder participates and the surveys that are accessible to the user are listed. The `Collection Status` suggests whether the survey collection is currently live. Also noted is the number of surveys the collection consists of, whether the selected e-mail group member has been invited or reminded about the surveys, how many of the surveys in the collection the member may participate in, and how many of those surveys he has completed. To view more details concerning the users participation in the survey collection, click on the name of the survey collection. You will then be presented with a table of surveys and survey statuses.


Email Groups: Search Email Addresses
Group Member: one@two.com
Member of the following Email Group(s):
Employees (Human Resources)
This group may participate in the following Survey Collections:
Customer Satisfaction
Collection Status: Live
Collection contains 2 Survey(s).
Member Status: Not yet invited
Member allowed to participate in 2 Survey(s).
Member completed 0 Survey(s).
Survey Live Completed
Customer Support
Product Satisfaction

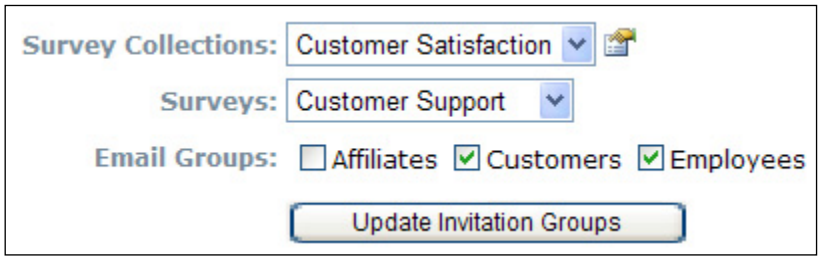
Emailer

Once surveys and e-mail groups have been created, sending e-mail invitations and reminders is a simple process. To begin, sign in as a *Publisher* or *Department Admin* and click `Emailer` in the `Invite` tab's panel. Initially, you will be presented with a single dropdownlist from which you must choose a **Survey Collection**.

ASSOCIATE E-MAIL GROUPS WITH SURVEY COLLECTIONS



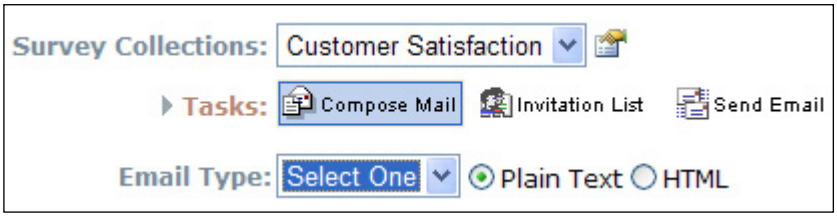
Once the survey collection is selected, the form on the right appears. Before performing any of the tasks listed (`Compose Mail`, `Invitation List`, *or* `Send Email`) at least one **Email Group** must be checked. Only selected **Email Groups** will be sent emails. Furthermore, the **Surveys** dropdownlist only appears if at least one e-mail group is check for the survey collection. By default, checked email groups will be sent invitations/reminders for all surveys in a collection. Once you have included at least one e-mail group, you can then *exclude* e-mail groups from taking certain surveys in the collection.



To exclude a group for a particular survey, select the survey from the **Surveys** dropdownlist. Uncheck the group you want to exclude and click the `Update Invitation Groups` button.

To return to the **Survey Collections** e-mail group form, click on the *Details* icon .

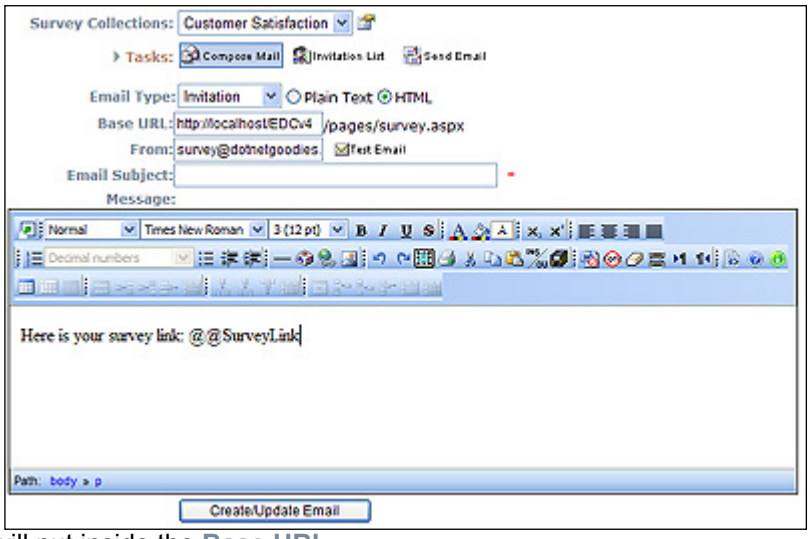
COMPOSE MAIL



The next step is to compose the e-mails. Click on the `Compose Mail` button in the **Tasks** toolbar.

Select either *Invitation* or *Reminder* from the **Email Type** dropdownlist. If you want to create an HTML e-mail using the WYSIWYG rich-text editor, check the *HTML* radio button.

The page will refresh when you make your selection from the dropdownlist. The screenshot on the right displays the rich text editor with *HTML* selected. The plain text e-mail form does not include the formatting toolbar.



The **Base URL** is the fully-qualified external URL used to access your survey application from outside your domain. Although this screenshot shows "localhost" as the domain, this is not what you will put inside the **Base URL**.

We are using localhost for testing purposes only (and you may do the same). However, if you send emails with localhost as the domain, your invitees will not be able to access the surveys.

The application will automatically append "/pages/survey.aspx" and the querystring with the users' unique ID. You only need to provide the domain and virtual directory (if the domain's root does not point to the virtual directory) of the application.

By default, the **Base URL** will be auto-populated with the value provided in the `Web.config` file for the `ApplicationURL`.

Enter the e-mail address that you want to have appear in the e-mail header as the sender in the **From** textbox. Like the **Base URL**, this field will be auto-populated with the value provided in the `Web.config` file for the `DefaultEmail`. You can send a `Test Email` to the address in the **From** textbox by simply clicking the `Test Email` button. All fields must be completed before sending a test e-mail. If you want to send a test e-mail to an address other than the *sender,* simply change the e-mail address to the address to which you want to send the e-mail, click the `Test Email` button, and change the **From** e-mail back to the correct sender e-mail address.

Enter the subject that you want to have appear in the e-mail header as the subject in the **Email Subject** textbox.

Enter the e-mail body text in the rich-text editor (or textarea, if you selected the *Plain Text* option for **Email Type**).

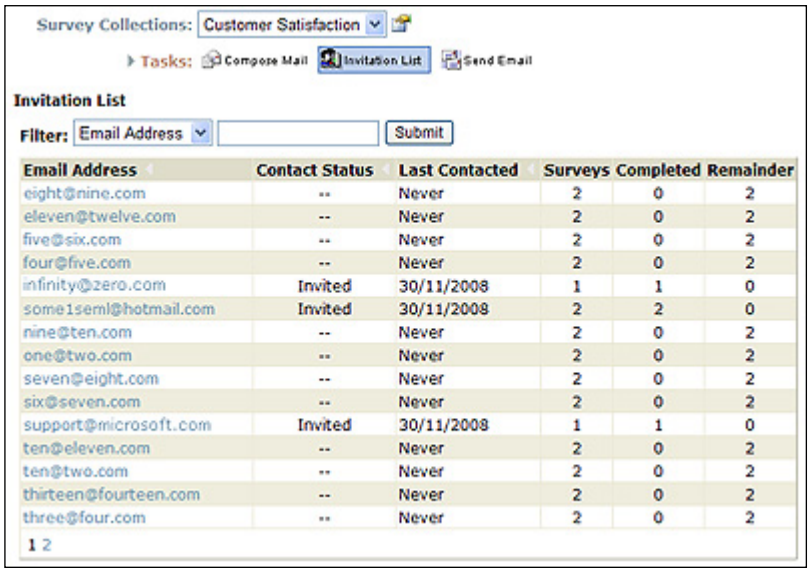
The e-mail is not valid until you have entered at least one instance of "`@@SurveyLink`". This tag will be replaced with the actual link to the survey. The `@@SurveyLink` tag must not have any formatting applied to it.

Click `Create/Update Email` to save your changes.

INVITATION LIST

To view all e-mail accounts that may participate in the survey collection, click on the `Invitation List` button on the **Tasks** toolbar.

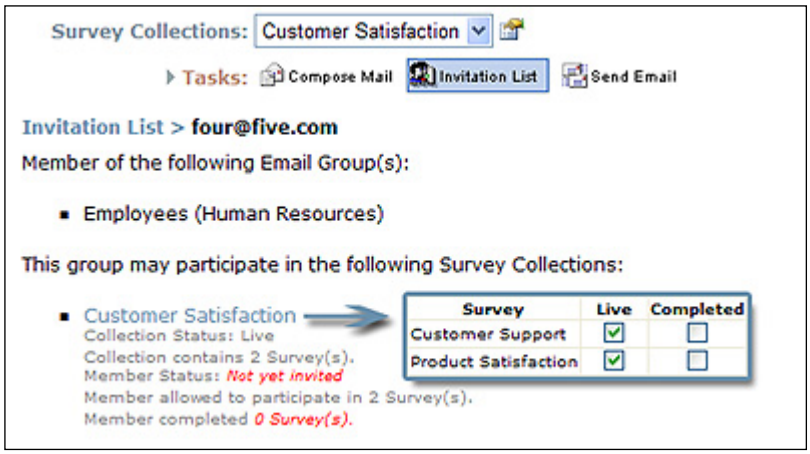
The table displays 15 e-mail addresses at a time. Click on the page numbers at the bottom of the table to view other pages. Sort the results by either *Email Address, Contact Status,* or *Last Contacted* by clicking on the captions in the table header. `Filter` the results by *Contact Status* or *Email Address* by selecting the appropriate filter, providing all or part of the e-mail address or status in the textbox and clicking the `Submit` button. Clear the textbox and re-submit the form to list all addresses (unfiltered) again.


Survey Collections: Customer Satisfaction
Tasks: Compose Mail Invitation List Send Email
Invitation List
Filter: Email Address Submit
Email Address | Contact Status | Last Contacted | Surveys | Completed | Remainder
eight@nine.com | -- | Never | 2 | 0 | 2
eleven@twelve.com | -- | Never | 2 | 0 | 2
five@six.com | -- | Never | 2 | 0 | 2
four@five.com | -- | Never | 2 | 0 | 2
infinity@zero.com | Invited | 30/11/2008 | 1 | 1 | 0
some1seml@hotmail.com | Invited | 30/11/2008 | 2 | 2 | 0
nine@ten.com | -- | Never | 2 | 0 | 2
one@two.com | -- | Never | 2 | 0 | 2
seven@eight.com | -- | Never | 2 | 0 | 2
six@seven.com | -- | Never | 2 | 0 | 2
support@microsoft.com | Invited | 30/11/2008 | 1 | 1 | 0
ten@eleven.com | -- | Never | 2 | 0 | 2
ten@two.com | -- | Never | 2 | 0 | 2
thirteen@fourteen.com | -- | Never | 2 | 0 | 2
three@four.com | -- | Never | 2 | 0 | 2
1 2

The table provides the following information:

- The e-mail addresses of all *active* members of *active* e-mail groups that may participate in the selected survey collection and can take at least one survey in the collection.
- The member's contact status (none, invited, or reminded) regarding the selected survey collection.
- The date that the member was last contacted regarding the selected survey collection.
- The number of surveys in the selected collection that the member is permitted to take.
- The number of surveys in the selected collection that the member completed to date.
- The number of surveys in the selected collection that the member has yet to complete.

To view a more detailed report for any one invitee, click the e-mail address you want to review.


Survey Collections: Customer Satisfaction
Tasks: Compose Mail Invitation List Send Email
Invitation List > four@five.com
Member of the following Email Group(s):
Employees (Human Resources)
This group may participate in the following Survey Collections:
Customer Satisfaction
Collection Status: Live
Collection contains 2 Survey(s).
Member Status: Not yet invited
Member allowed to participate in 2 Survey(s).
Member completed 0 Survey(s).
Survey | Live | Completed
Customer Support
Product Satisfaction

The e-mail groups in which the invitee is a member appear in a bulleted list. The survey collections in which the member's e-mail groups are participants, are listed as well. If one of the member's groups is excluded from a survey, but another one of the member's e-mail groups is permitted to take a survey, the member will be permitted to take the survey. In other words, the least restrictive rights apply.

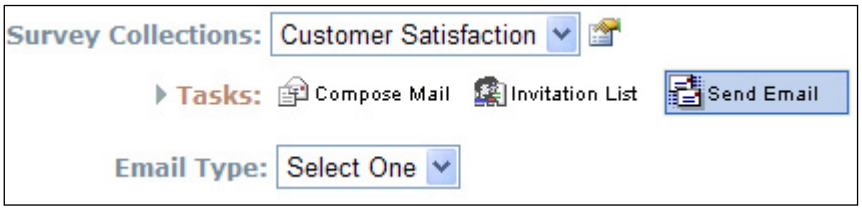
The *Collection Status* suggests whether the survey collection is currently live. Also noted is how many surveys the collection consists of, whether the selected e-mail group member has been

invited or reminded about the surveys, how many of the surveys in the collection the member may participate in, and how many of those surveys he has completed. To view more details concerning the users participation in the survey collection, click on the survey collection name. You will then be presented with a table of surveys and survey statuses.

To return to the *Invitation List* click on the `Invitation List` > breadcrumb link.

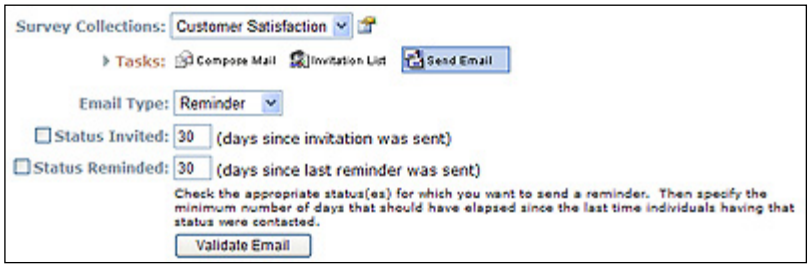
SEND EMAIL

Click the `Send Email` button in the **Tasks** toolbar to validate and send e-mails.



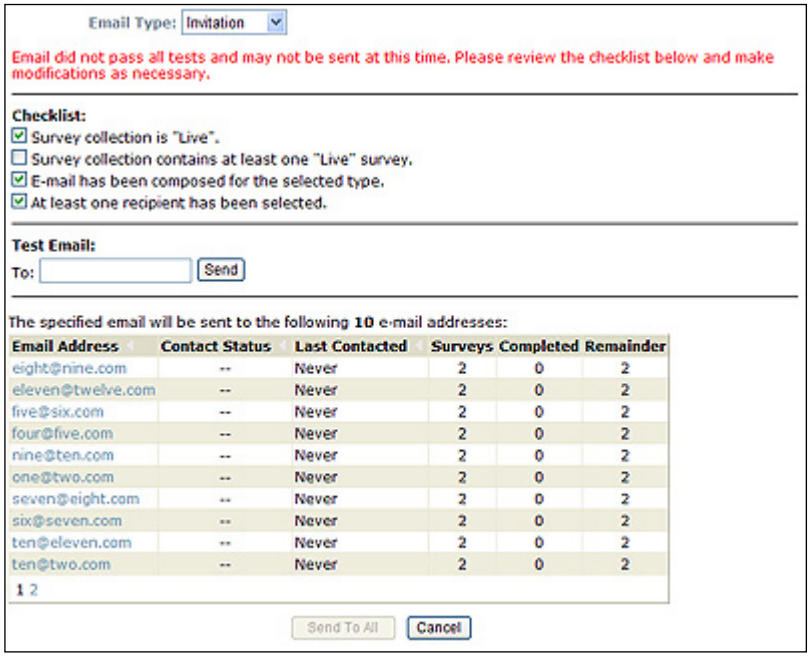
Select an **Email Type** from the dropdownlist (either *Invitation* or *Reminder*). When *Invitation* is selected, the `Validate Email` button appears. However, when *Reminder* is selected, you are asked to specify a few details before validating the e-mail.

While *invitations* are sent to all active members of selected e-mail groups who were never contacted regarding the selected survey collection, *reminders* may be sent to e-mail group members who have been invited but have not yet been reminded and/or those members who have already been reminded. Check the status(es) for which you want to send reminders and the minimum number of days that should have elapsed since the last time individuals having those statuses were contacted.


Survey Collections: Customer Satisfaction
Tasks: Compose Mail Invitation List Send Email
Email Type: Reminder
Status Invited: 30 (days since invitation was sent)
Status Reminded: 30 (days since last reminder was sent)
Check the appropriate status(es) for which you want to send a reminder. Then specify the minimum number of days that should have elapsed since the last time individuals having that status were contacted.
Validate Email

Click the `Validate Email` button to go to the confirmation screen.

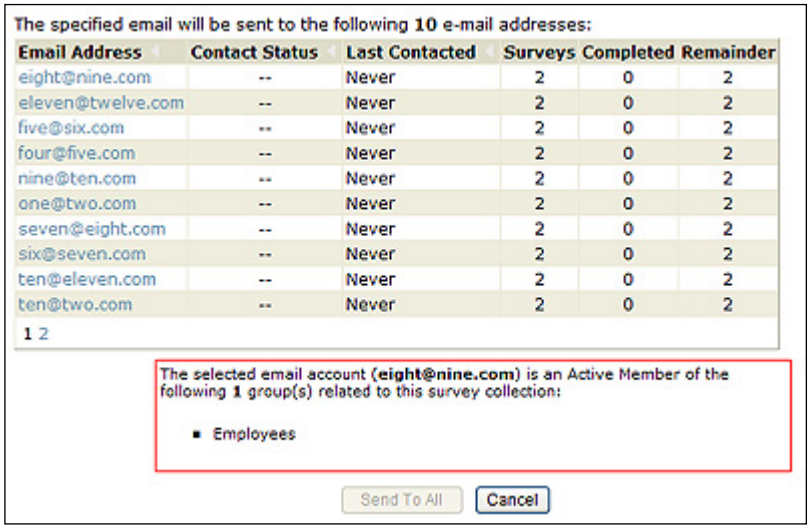
The system will determine whether all criteria has been satisfied before sending e-mails. As demonstrated by the screenshot on the right, the requirements are that the (1) *Survey Collection is Live*, (2) *the survey collection must contain at least one "Live" survey,*(3) *e-mail must have been composed for the selected type, and* (4) *at least one e-mail recipient must be specified.* As long as an e-mail was composed for the selected **Email Type** you can send a test e-mail by entering the e-mail address in the `To` textbox and clicking the `Send` button. If an e-mail has not yet been created, this option is disabled.


Email Type: Invitation
Email did not pass all tests and may not be sent at this time. Please review the checklist below and make modifications as necessary.
Checklist:
Survey collection is "Live".
Survey collection contains at least one "Live" survey.
E-mail has been composed for the selected type.
At least one recipient has been selected.
Test Email:
To: Send
The specified email will be sent to the following 10 e-mail addresses:
Email Address | Contact Status | Last Contacted | Surveys | Completed | Remainder
eight@nine.com -- Never 2 0 2
eleven@twelve.com -- Never 2 0 2
five@six.com -- Never 2 0 2
four@five.com -- Never 2 0 2
nine@ten.com -- Never 2 0 2
one@two.com -- Never 2 0 2
seven@eight.com -- Never 2 0 2
six@seven.com -- Never 2 0 2
ten@eleven.com -- Never 2 0 2
ten@two.com -- Never 2 0 2
1 2
Send To All
Cancel

If the e-mail does not pass all tests, you may not send e-mails. However, you can still view all the e-mail addresses which will receive the e-mail once the criteria is met and the `Send to All` button is clicked.

To view the groups which individual members are assigned to, click the member's e-mail address. A message box will appear with a list of groups which the member is assigned to.

The application determines who can receive e-mails based on the e-mail type specified and the groups that have been associated with the surveys collections on child surveys.

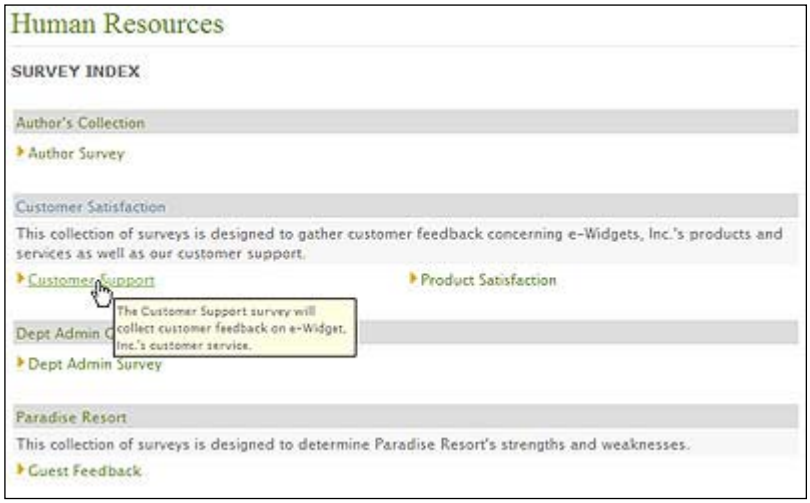

The specified email will be sent to the following 10 e-mail addresses:
Email Address
Contact Status
Last Contacted
Surveys
Completed
Remainder
eight@nine.com -- Never 2 0 2
eleven@twelve.com -- Never 2 0 2
five@six.com -- Never 2 0 2
four@five.com -- Never 2 0 2
nine@ten.com -- Never 2 0 2
one@two.com -- Never 2 0 2
seven@eight.com -- Never 2 0 2
six@seven.com -- Never 2 0 2
ten@eleven.com -- Never 2 0 2
ten@two.com -- Never 2 0 2
1 2
The selected email account (eight@nine.com) is an Active Member of the following 1 group(s) related to this survey collection:
Employees
Send To All
Cancel

When the e-mail satisfies all the criteria, and you are ready to send e-mails, simply click the `Send To All` button and click `OK` on the confirmation alert.

SURVEYS

Surveys are the actual forms the survey taker is requested to fill out and submit. Once a survey is submitted at least once, reports may be generated for analysis.

Survey Index


Human Resources
SURVEY INDEX
Author's Collection
Author Survey
Customer Satisfaction
This collection of surveys is designed to gather customer feedback concerning e-Widgets, Inc.'s products and services as well as our customer support.
Customer Support
Product Satisfaction
The Customer Support survey will collect customer feedback on e-Widget, Inc.'s customer service.
Dept Admin C
Dept Admin Survey
Paradise Resort
This collection of surveys is designed to determine Paradise Resort's strengths and weaknesses.
Guest Feedback

The `Survey Index` lists all active surveys in E-Data Collection's database (i.e., administered by the `Survey Builder`) in the specified Department. All active *Survey Collections* are listed with their group descriptions, beneath which are the links to the active surveys contained in the collection. Mouse over the surveys to view the selected survey's description. If the *Survey Collection* is not active, neither the collection nor the child surveys will appear in the index. If a *Survey* is inactive (or the current date is not within a specified date range), that survey will not appear in the index; and, the *Survey Collection* will appear in the index only if it contains at least one other *active* survey.

Clicking a survey name, will redirect you to the Survey form.

You can view all active survey collections and all the active surveys assigned to them starting from the *Department Index*: http://localhost/EDCv4/pages/index.aspx

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Survey Form

To discover the URL to a particular survey, preview the survey from `Survey Builder` or from the `Survey Index` when the survey is active. The URL is in the address bar of the browser; an example of which follows:
http://*DomainNameOrIPAddress*/Survey/pages/survey.aspx?id=45&sid=16.

The querystring contains two parameters: "id" is the *Survey Collection* ID, while "sid" represents the *Survey* ID. Note the following about requested surveys:

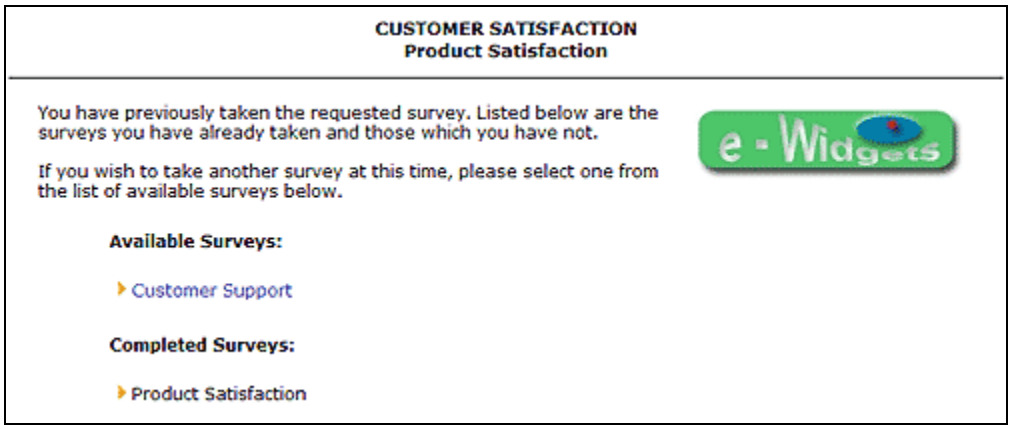
- If the requested survey is not active or the "sid" is not provided in the URL, *and there is more than one active survey in the same collection*, the page will display a list of available surveys with a message requesting the user to select a survey.

- If the requested survey is not active or the "sid" is not provided in the URL *and there is just one active survey in the same collection*, the user will be automatically redirected to the one active survey.

- If the requested survey is not active or the "sid" is not provided in the URL *and there are, in fact, no other active surveys in the same collection*, a message will appear stating that the requested survey is not available.

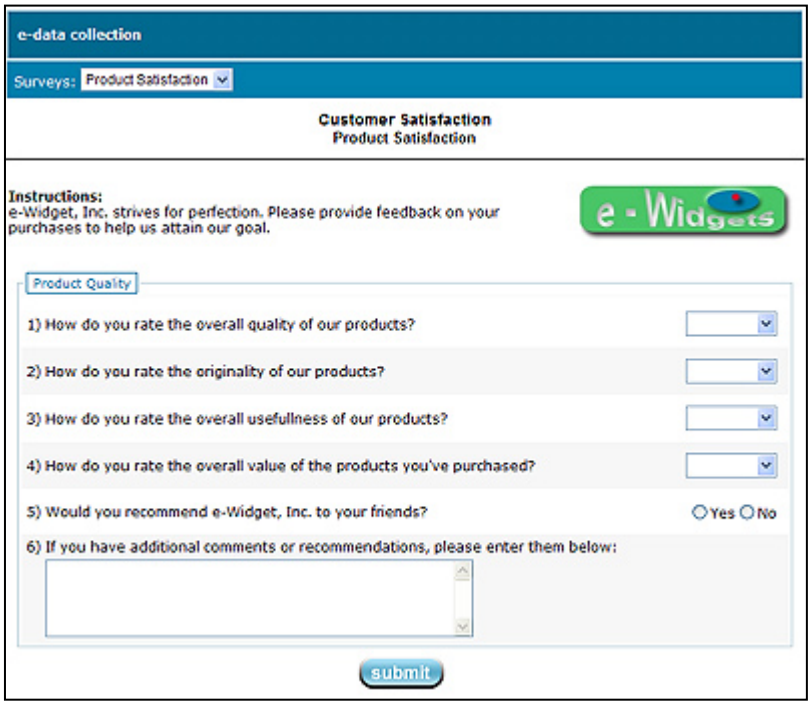
If *Survey Security* is set to "Cookies" and the user requesting an active survey has previously submitted the survey, the system will check if there are other surveys in the collection which are

active that the user has not yet submitted. If the user already took the survey, a message will appear to let the user know if there are other surveys that are available which he has not previously taken. A list of surveys taken appears in a readonly list, and the available surveys appear in a list with links to those surveys. (See screenshot below.)


CUSTOMER SATISFACTION
Product Satisfaction
You have previously taken the requested survey. Listed below are the surveys you have already taken and those which you have not.
If you wish to take another survey at this time, please select one from the list of available surveys below.
e-Widgets
Available Surveys:
Customer Support
Completed Surveys:
Product Satisfaction

A similar message will appear if the user completed all the surveys in the collection. However, the list of Available Surveys would not be visible.

The screenshot on the right is an example of a requested survey that resides in a *Survey Collection* which contains more than one active survey that the user has not yet submitted.


e-data collection
Surveys: Product Satisfaction
Customer Satisfaction
Product Satisfaction
Instructions:
e-Widget, Inc. strives for perfection. Please provide feedback on your purchases to help us attain our goal.
e-Widgets
Product Quality
1) How do you rate the overall quality of our products?
2) How do you rate the originality of our products?
3) How do you rate the overall usefullness of our products?
4) How do you rate the overall value of the products you've purchased?
5) Would you recommend e-Widget, Inc. to your friends?
Yes No
6) If you have additional comments or recommendations, please enter them below:
submit

If "Product Satisfaction" was the only active survey in its collection, the *Surveys* dropdown menu in the header (which was added to the associated `Page Layout`) would be absent.

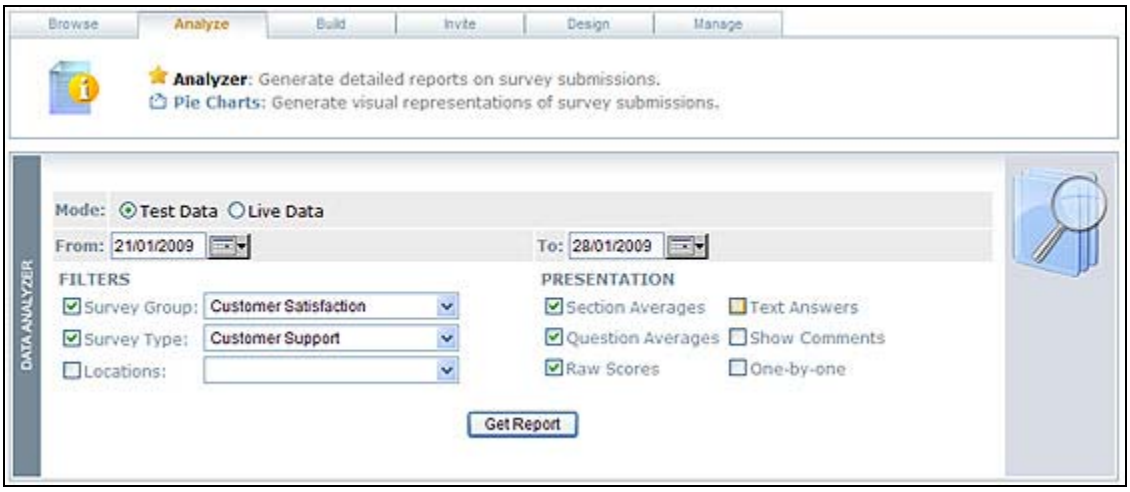
The survey contains just one section ("*Product Quality*"), which in turn contains six questions. The first five questions contain just one *Answer Group* assigned to each of them. (When a question has more than one *Answer Group* assigned to it, the controls will appear side-by-side.) The sixth question has no answer group assigned to it but, instead, includes the optional comment box (added by checking the "True" radiobutton option in **Allow Comments** on the **Questions** form in `Survey Builder`.

If there are required fields which the survey taker neglects to fill out before attempting to submit the form, an alert will pop up and the form will not be submitted until the problems are corrected and the submit button is clicked again.

Once the form is successfully submitted, the confirmation message appears. If there are other active surveys in the same collection, the user may select another survey to take.

DATA ANALYSIS

Surveys would be meaningless without a means of generating clear, intuitive reports to visualize and analyze data. E-Data Collection provides two powerful tools for analyzing data: `Analyzer` and `Pie Charts`. Links to both are on the `Analyze` tab's panel. Use the following URL to access the `Analyzer` while logged into the Admin Tool:
http://localhost/EDCv4/admin/reports.aspx



To generate Pie Charts, click on the `Pie Chart` link, or for detailed data, use the `Analyzer` page (which is the default page).

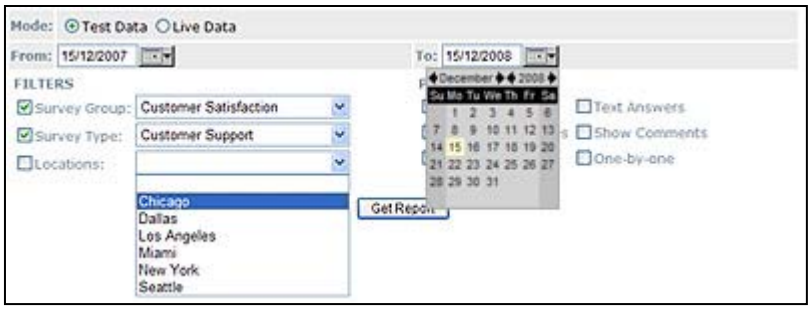
Both tools require you to fill out some initial criteria prior to generating the results. While your optional **Presentation** options are different for `Pie Chart` and `Analyzer`, the required **Filters** such as date range and Survey Type are the same.

Analyzer

The Data Analyzer gives you result averages, section averages, totals of how many submissions gave each response, percentages and values. You can optionally view submissions one-by-one and read comments and other text responses.

FILTERS

When the above URL is initially accessed, you are presented with the filters/presentation form (see the screenshot below).



Department Admin users can choose to view either `Test Data` or `Live Data`. *Business Analysts,* however, may only view `Live Data`, while *Survey Publishers* and *Survey Authors* may only view `Test Data`. Therefore, only *Department Admin* users have the option to choose their display `Mode` ("Test Data" or "Live Data"). If a user has a combination of roles, such as *Publisher* and *Analyst,* he will also have the option to select the mode.

Next, the user is presented with the `From` and `To` date fields. The date range specified here will be used to gather results on surveys submitted within that timeframe. By default, the previous week is selected.

The remainder of the filters are on the left side of the form under the **Filters** caption. The first two ("Survey Group" and "Survey Type") are required. The Survey Group is the collection where you will find the survey. The Survey Type refers to the survey itself. Before you select a Survey Type you must first select its parent Survey Group (or collection). The form refreshes when you select the group and again when you select the type.

If a **Filter Alias** was specified in the `Survey Builder` for questions contained in the selected survey, and at least one of its **Answer Option Groups** allows filtering, the question's **Answer Options** will appear here as filters with the name specified in **Filter Alias**. Remember, however, that the filter will appear only when the question has an appropriate answer option group assigned to it and allows filtering. The two types of answer option groups that work as filters are: (1) options from external sources, and (2) options that were created with the `Option Manager`. In other words, results cannot be filtered on text input fields.

In the above screenshot, it is clear that only one question in the "Customer Support" survey specified an alias in the **Filter Alias** field in the `Survey Builder`.

The more filters a survey has, the more granular the reports become. In the above example, the analyst can generate a report displaying all results or only those results for a specific location.

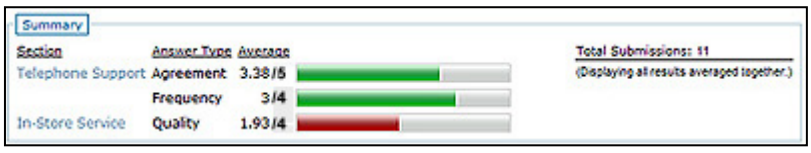
After selecting the type of report to generate using the **Presentation** options (described below), the analyst generates reports by clicking the `Get Report` button.

PRESENTATION

There are six presentation options. Any combination of options may be selected to generate different views of the survey results. There are two disadvantages to selecting all options at once: Firstly, it may be somewhat overwhelming to try to analyze so much data at once; and secondly, a larger result set puts a greater strain on the server.

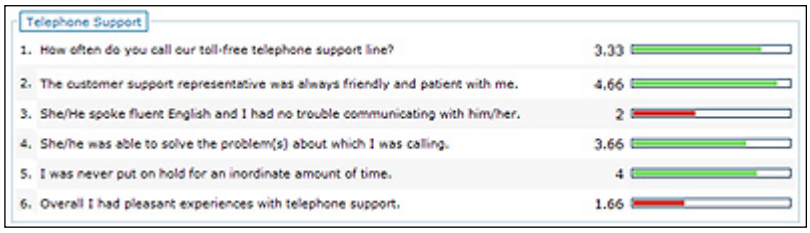
With no presentation options selected, the only reporting element that appears is the `Summary` fieldset indicating the number of total submissions that meet the selected criteria.

The presentation options are described below:



Section Averages*:* As you might expect, averages can only be performed on responses that have a numeric value (i.e., responses selected from `Option Groups` that are **Used for Averaging**). Note that some response options within `Option Groups` that are **Used for Averaging** are not used for averaging. For example, if the options "Neutral" or "N/A" were selected as responses for some submissions, these responses will not be factored into the average. **Section Averages** generates averages for each section and displays a color coded bar to visually represent the average. Viewing section averages provides an easy way to quickly determine strengths and weaknesses. You'll also notice that the *Section* "Telephone Support" is listed with two different average types, which is due to the fact that there is more than one numeric *answer type* assigned to questions within that section. For example, "Telephone Support" has five questions with an "Agreement" response, and one question that has a "Frequency" response. Different answer types (or, *answer groups*) are not averaged together as that would result in inaccuracies and

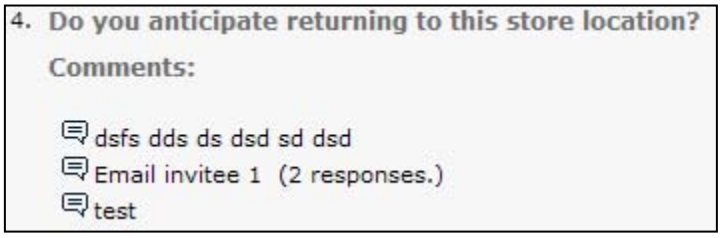
confusion. In the "Telephone Support" section, only the first question required a "Frequency" response, while the last five questions required an "Agreement" response. Since there was only one "Frequency" response (i.e., the first question in the section), the question average for question number one produces the same result as the "Telephone Support" section average for "Frequency" responses.


Telephone Support
1. How often do you call our toll-free telephone support line? 3.33
2. The customer support representative was always friendly and patient with me. 4.66
3. She/He spoke fluent English and I had no trouble communicating with him/her. 2
4. She/he was able to solve the problem(s) about which I was calling. 3.66
5. I was never put on hold for an inordinate amount of time. 4
6. Overall I had pleasant experiences with telephone support. 1.66

Question Averages: Again, averages can only be performed on responses that have a numeric value (i.e., responses selected from *Option Groups* that are *Used for Averaging*). Note that some response options within `Option Groups` that are **Used for Averaging** are not used for averaging. For example, if the options "*Neutral*" or "*N/A*" were selected as responses for some submissions, these responses will not be factored into the average. **Question Averages** generates averages for each question and displays a color coded bar to visually represent the average. Viewing question averages provides an easy way to quickly determine strengths and weaknesses. The image above displays the question averages for the section "Telephone Support" (though the full report shows all questions for all sections).

Value	Text	Count	% Total	Min:	1
2	Disagree	2	67%	Max:	5
3	Neutral	1	33%		

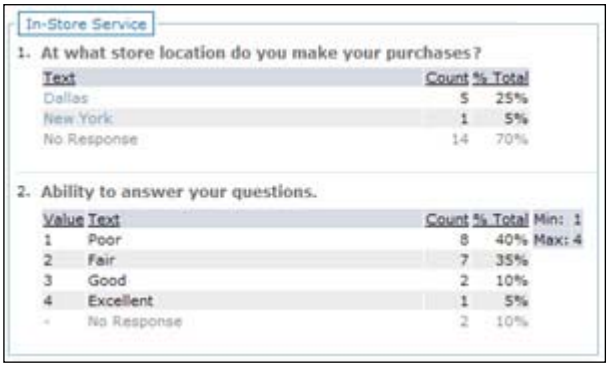
Raw Scores: Like averages, **Raw Scores** can only be performed on responses that have a numeric value (i.e., responses selected from `Option Groups` that are **Used for Averaging**). When this option is checked in the *Appearance* section of the report generator before running a report, a table like the one shown above appears under each question for which raw scores can be generated. It contains a `Value` column representing the numeric value given to the option, a `Text` column for the option text, a `Count` column representing the number of submissions with this option selected, and a `% Total` column which calculates the percent of total submissions that responded with this option selected. This particular raw scores table belongs to question number three. Looking at question number three in the screenshot for **Question Averages** above, you see that the average is "2". On first glance, it may appear that there is a discrepancy since ((2x2) +(3x1))/3 equals 2.33. But, "Neutral" is not an option that is **Used for Averaging**. Therefore, the formula ignores every instance of "Neutral", and is simply (2x2)/2, which equals 2. Also note that although only answer options that were actually selected by users appear in the table, ignoring those for which there were no responses. You can see, however, the range of possible responses with the `Min` and `Max` values appended to the upper-right side of the table.



Show Comments: When **Allow Comments** is set to true when creating questions in the `Survey Builder` a multiline textbox appears beneath the question on the survey form. To view feedback supplied by survey takers, make sure the **Show Comments** checkbox is selected. It is advisable to run reports that show comments separately from reports with other options selected, especially when reporting on a large number of submissions because the report may become rather lengthy with this option selected. Under each question for which comments are allowed, the comments appear in a bulleted list. Although it is unlikely that two submissions will enter exactly the same comments; in the rare case that this

occurs, the comments are only listed once with a parenthetical note stating how many times the form was submitted with that comment.

Text Answers*:* Text answers appear similar to raw scores in a table. The only difference being that they have no numeric value. Text answers are defined as *Answer Groups* that are *not used for averaging.* The table has three columns as follows: a `Text` column for the option text, a `Count` column representing the number of submissions with this option selected, and a `% Total` column which calculates the percent of total submissions that responded with this option selected.


In-Store Service

1. At what store location do you make your purchases?

Text	Count	% Total
Dallas	5	25%
New York	1	5%
No Response	14	70%

2. Ability to answer your questions.

Value	Text	Count	% Total	Min: 1
1	Poor	8	40%	Max: 4
2	Fair	7	35%	
3	Good	2	10%	
4	Excellent	1	5%	
-	No Response	2	10%	

There are two things to note about the above image:

1. In the above scenario, there were 20 respondents, but only 6 responded to question #1 and 18 responded to #2. 70% in the first question offered no response, while 10% offered no response to the second question. These items are shown in gray. Furthermore, while in the above scenario both questions total 100%, due to rounding, it is possible that even in instances where total responses equal total submissions, percentages might add up to slightly more or less than 100% (usually by no more than 1% in either direction).

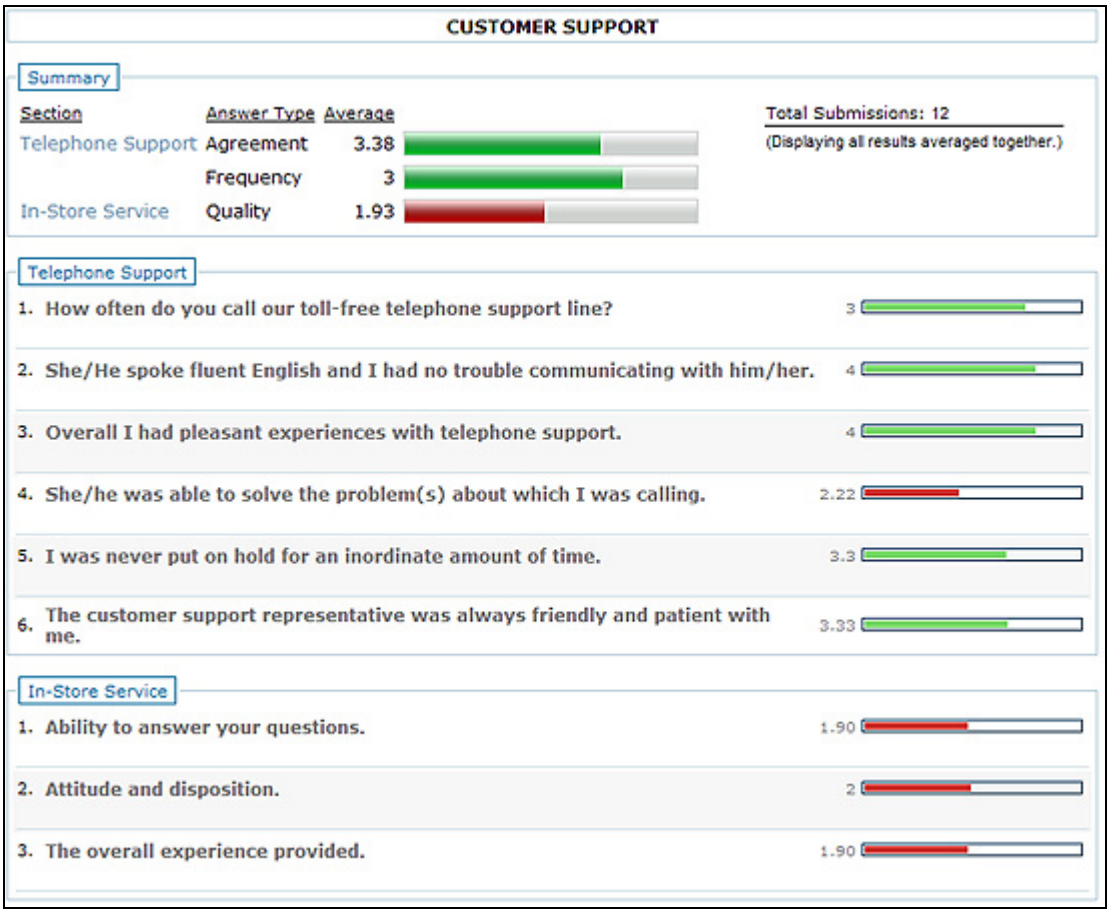
2. The screenshot above demonstrates another special feature of the `Analyzer`, namely that legitimate filters specified in the **Filter Alias** field in the `Survey Builder` will appear as links when they appear in the `Text Answers` or `Raw Scores` tables (like "Dallas" and "New York" in the screenshot above). Clicking on a link will cause the page to reload with a new report filtering the results further based on the option link that was clicked.

One-by-one*:* This option allows you to separate the results into individual reports (one page per submission included in the results). In the `Summary` fieldset, a message appears noting the total number of submissions included in the results and noting which submission you are currently viewing (e.g., "Displaying the 1st of 3 submissions"). At the bottom of the page will appear a new dropdown menu listing all the submission dates, with the date and time of the submission currently being viewed. Click on the "`Next`" or "`Previous`" links, or select a different datetime to view a another individual report. Although when you select **One-by-one** you are, in fact, viewing results of individual submissions, you can nevertheless select **Question Averages** to get a visual representation of the numeric responses.

RESULTS

Much of what needs to be said regarding the generated reports was already mentioned above in the previous sections (**Filters** and **Presentation**). A few additional notes follow.

To generate a quick visual representation of the results simply check the two **Presentation** options "`Section Averages`" and "`Question Averages`" and click the `Get Report` link. The generated report will look similar to the following screenshot.



It is worth noting the following points:

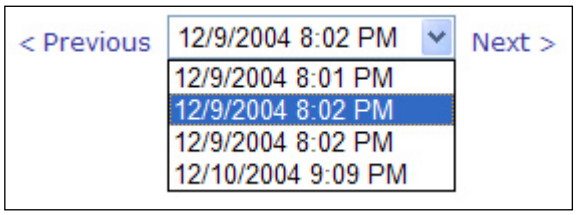
- Although the "Customer Support" survey consists of three sections, only two are shown in the report. This is because the third section "Email Promotions" contains no questions with answer options that have a numeric value; hence, averaging could not be performed on that section.

- Similarly, although the section "In-Store Service" contains five questions in all, only three are displayed in the report because the other two questions do not gather results that are *used for averaging.*

- If a section is currently deactivated (in the `Survey Builder`), those sections will still be included in the report. However, if a section is deactivated, its name will be displayed in red wherever it appears in the report (i.e., in the Summary section and the legend for its fieldset).

- To return to the `Filters` form to modify criteria, click on the `Back to filters` link.

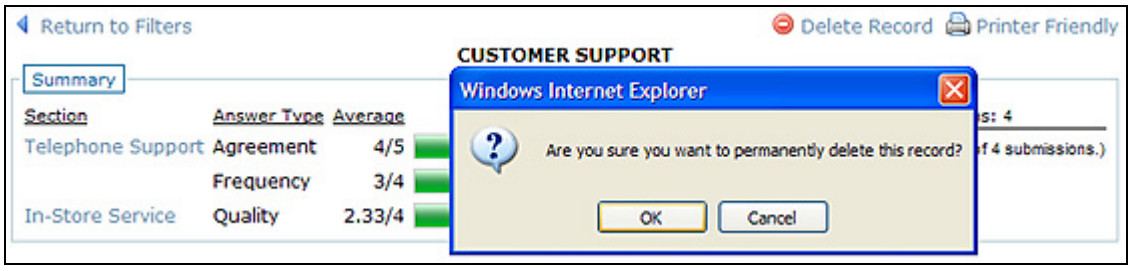
Also, remember to click the **One-by-one** option in the **Presentation** section of `Analyzer` in order to view individual submission responses for each of the results that satisfy the criteria selected in the filters. The report will include a dropdown menu and links at the bottom of the report to navigate to other submission results in the result group.



The *One-by-One* feature is best for smaller result sets as all results will be added to the dropdownlist.

DELETING RECORDS

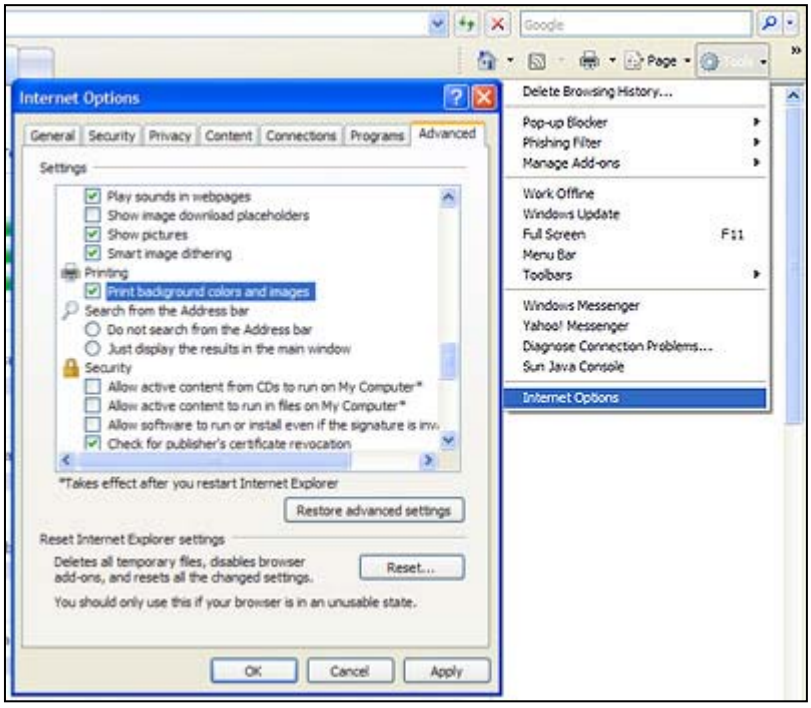
Also, you can use the *One-by-one* feature to delete individual records. When *One-by-One* is selected, you will be given an additional link button above the survey title labeled “Delete Record”. Click this button and confirm your desire to delete the record to permanently remove the record from the database.



While you should probably never delete records for active surveys to avoid skewing results, this feature is useful for deleting bogus survey submissions.

PRINTING REPORTS

The following applies to Pie Chart reports as well as Analyzer:



Click the *Printer Friendly* link above and to the right of the survey title to get a printer friendly rendering of the report. Page elements such as headers, navigation and sidebars are removed and the *Printer Friendly* link changes to read “Web Friendly”. Click *Web Friendly* to return to the previous view with navigation bars.

Note that depending on your browser preferences, you may need to specify that you want to print backgrounds. For example, if you use Internet Explorer 7, and you want to print backgrounds, you must ensure that you have specified same in your browser’s *Internet Options*.

Tools > *Internet Options* > *Advanced* tab > *Printing* section > *Print Background Colors and Images*

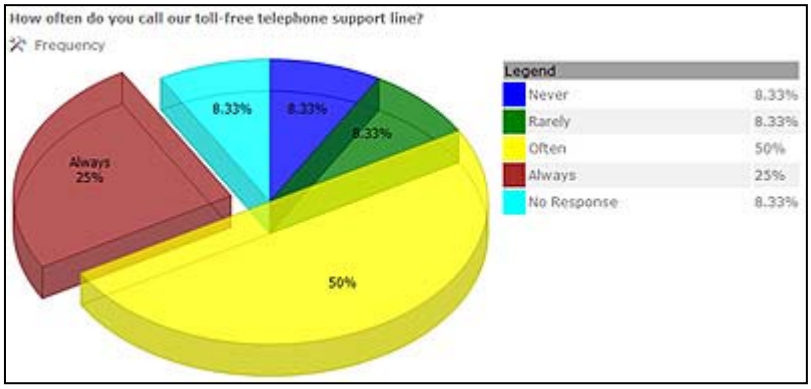
NOTES ON REPORTING FEATURE

Again, it should be reiterated that regardless of the combination of **Presentation** options you select, if a section or question does not have results to display, it will be skipped and will not be displayed in the report.

As a final note, deactivated questions (that are deactivated in the Survey Builder form), will displayed in red in the reports. The results, if there be any, will still be shown. The red color is used simply to signify that these questions and answer groups are no longer available on the survey form for new survey takers.

Pie Charts

Pie Charts offer a visual representation of data collected by E-Data Collection. The Pie Chart tool gives you a great deal of control over how the charts are displayed, whether you want to resize the chart, show labels on the pie slices, rotate the pie, or displace a slice for emphasis.



The chart to the right is an example of a customized pie chart. We decided to show only one label (Always), while displaying only percentages on all other slices. For emphasis, "Always" has been displaced (disconnected from the rest of the pie), which was rotated a few degrees in order to show more clearly where the slice was split. Clicking on any of the option names in the Legend will show or hide the label on its corresponding slice.

Use the following URL to access the Pie Chart tool while logged into the Admin Tool:
http://localhost/EDCv4/admin/Charts.aspx

You can also access this tool, by clicking the Pie Charts link on the Analyze tab.

FILTERS

To generate a pie chart report, first fill out the required criteria in the pie chart Filters, select your Presentation preferences, and click the Get Report button.

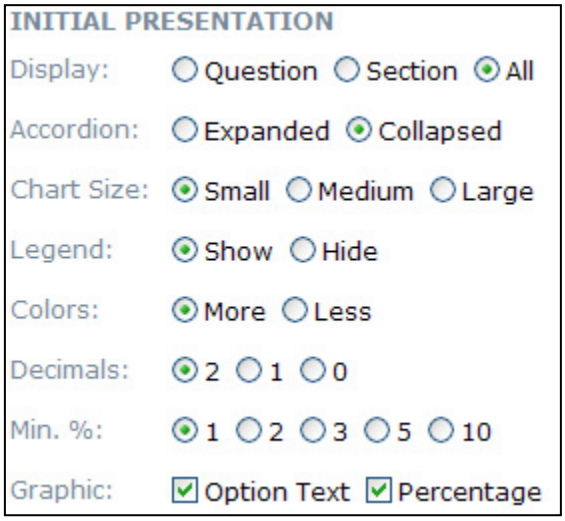
The filters, such as date range, survey group and survey type, as well as custom filters were discussed in the previous section, Analyzer, and thus, if you have not already reviewed those instructions, we recommend you do so now before proceeding as the current section will focus on the *differences* between Pie Charts reporting and reports generated from the Analyzer page.

The differences all lie in the Presentation options and final display.

PRESENTATION

There are eight presentation features which you can set when generating a report. These options determine the *initial* display of the pie charts; but, the Pie Chart tool enables you to easily modify individual pie chart displays even after they have been created. First we'll have a look at the initial presentation settings.

Display: The creation of pie charts, particularly those with many slices, can take some time to build and could potentially put strain on the server as it is a resource-intensive process. Furthermore, larger surveys (with many questions) might produce a very long report. Therefore, it is advisable to display only a few questions at a time. Nevertheless, it is ultimately up to you how many pie charts to display at once. The options are as follows:



- `All` – Display all questions for all sections at once.
- `Section` – Display each *section* separately, using links at the bottom of the section report to navigate between sections.
- `Question` – Display each *question* separately, using links at the bottom of the question report to navigate between questions.

Accordion: In the event that you choose to display many pies at once, you might find it useful to initially collapse all the sections and questions, thus enabling you to expand only the questions whose reports you particularly want to view.

In the image on the right, notice that only one of the pies is visible. This is because when the report was generated, we decided to show `All`, however, **Accordion** was set to `Collapsed`; once the collapsed report was displayed, we navigated to the *Importance* answer group pie for the *Restaurants* question in the section named *Paradise's Features.* To display or hide any section, question or response pie, simply click on its heading text.

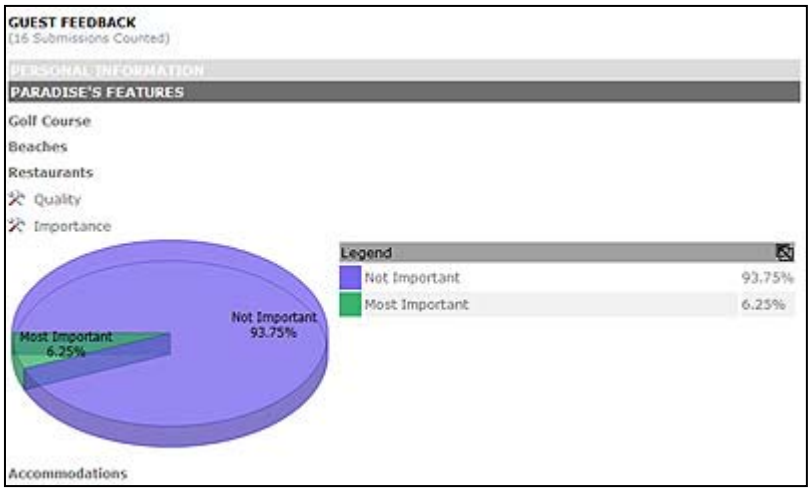


Chart Size: Three predefined pie chart sizes are available to choose from. `Small` is 300x198 pixels, `Medium` is 450x300 pixels, and `Large` is 600x395 pixels. Choose the size that looks best for your screen resolution. Sometimes there are so many slices that when the labels are visible they overlap. In this scenario, one way to resolve the issue may be to enlarge the pie; for even though the pie is enlarged, the label font size remains the same.

Legend: Select whether you want to initially `Show` or `Hide` the pie chart's legend. Like most other **Presentation** options, you can change the display for each pie after the report loads. For example, if you have chosen to display the legend initially and then decide to hide one legend for one of the pie charts after it loads, simply access the pie chart's toolbar by clicking the toolbar icon , and then uncheck the `Legend` checkbox.

Colors: Choose whether the pie chart slices should use `More` or `Less` colors. If you choose `More`, all of the available colors in the color library will be used for slices before repeating colors. If you choose `Less`, only the first few colors in the library will be applied to slices. (This setting cannot be modified once report generation takes place.)

Decimals: Select how many decimal places you want to have appear in percent labels. The choices are `0`, `1`, and `2`. Due to rounding, the total percentages for slices may add up to slightly more than 100%; therefore, additional decimal places will help to avoid these minor inaccuracies. (This setting cannot be modified once report generation takes place.)

Min %: Slices representing less than 1% of the pie cannot be represented in their own slice, but rather are combined with other small slices to form a single slice labeled "*Other*". You can choose to increase the minimum percentage to `2`, `3`, `5`, or `10`. Increasing the minimum percentage can help to avoid overlapping slice labels, thus ensuring a cleaner graphic representing the more popular responses. (This setting cannot be modified once report generation takes place.)

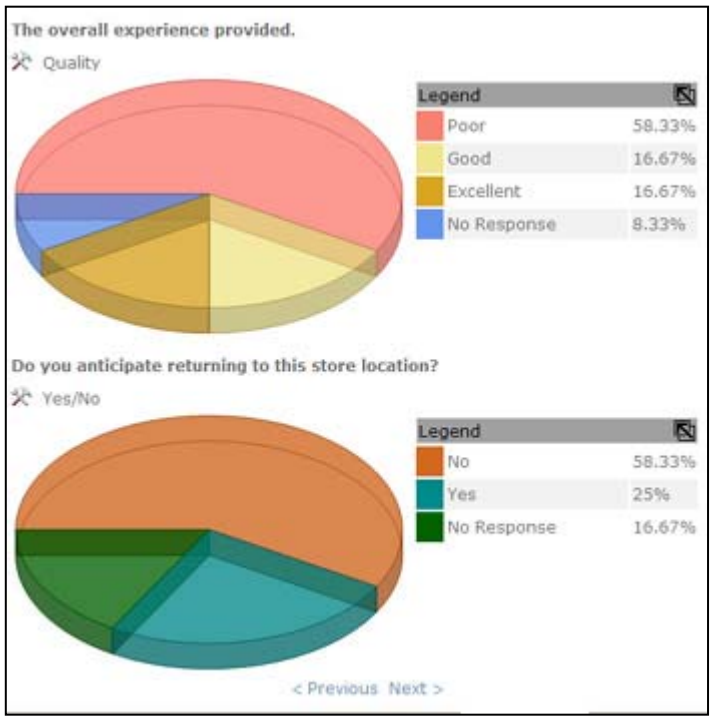
Graphic: Pie charts appear as colored slices. You can optionally add the `Option Text` and/or the slice `Percentage` to the graphic. Once the pie charts are created, however, it is still possible to remove all labels from any pie, or even remove only labels from certain slices.

Once you have specified all required criteria and selected your initial presentation settings, click `Get Report` to view the pie charts.

PIE CHART REPORTS

To get a feel for all features that are available in the pie chart reports, select `Section` for the **Display** setting and click the `Get Report` button, By doing so, a report will be generated with multiple questions per page, and as many page as there sections in the survey.

The snapshot to the right is of the bottom portion of the second page (second Section) of the *Customer Support* survey. Note that the full page contains five pie charts (not just two).

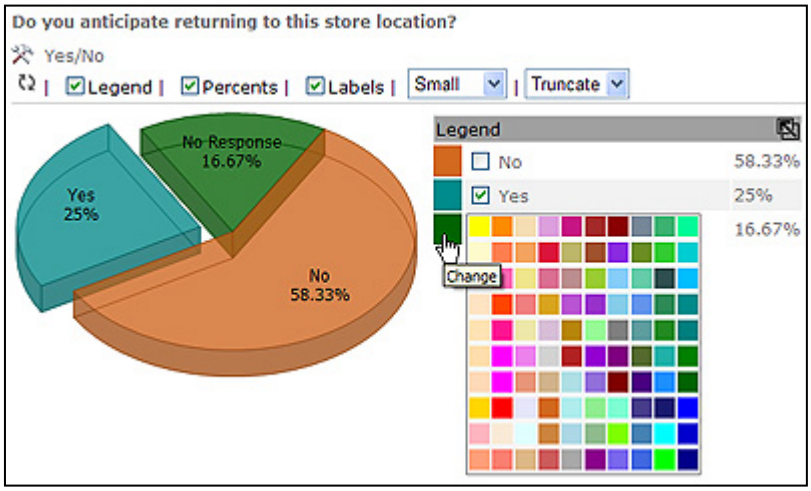


At the bottom of the page there are two links: `Previous` and `Next`. Since this is the second section, `Previous` takes the user back to the first section, and `Next` takes the user to the third section. The `Previous` link is disabled on the first page, and the `Next` link is disabled on the last.

To move the `Legend` above the chart (rather than to the right of it), click on the swap icon in the legend's header: .

Clicking on the various options within the `Legend` will either display or hide the option text label on the pie depending on the

label's current state. Similarly, clicking on the percentages with the legend will either display or hide the percentage label on the pie slice corresponding to the clicked item.



To reveal or hide all labels or all percentages, display the pie chart toolbar by clicking the `Tools` icon then check or uncheck `Percents` or `Labels` as desired.

Before discussing the other settings available via the toolbar, note that slice colors can be selected simply by clicking the color square relating to the slice you want to modify. Clicking the color square opens the `color picker`, where you can choose from 100 colors. Also note that you can `displace` a pie slice simply by checking its corresponding checkbox in the legend.

Returning to the toolbar, notice the `Rotate` icon. Clicking this icon spins the pie 10° clockwise. To show or hide the legend, simply check or uncheck the `Legend` checkbox. To `Resize` the pie, select *Small*, *Medium* or *Large* from the first dropdownlist. `Small` is 300x198 pixels, `Medium` is 450x300 pixels, and `Large` is 600x395 pixels.

Finally, you can limit the label text length for all slices by selecting a value from the `Truncate` dropdownlist. Like some other settings, this option is provided to avoid overlapping of label text for pies with many thin slices or pies with long responses whose text may exceed the width of the slice or even exceed the size of the graphic. It is possible to truncate text to `5`, `10`, `15`, `20`, or `25` characters in length. Text that exceeds the specified length will appear in truncated form followed by ellipses (…).

GLOSSARY

Accordion – A page that features an accordion is one that contains multiple panels that can be expanded and contracted. Each panel can have sub-panels. When the outer-most panel is collapsed, so too are its sub-panels. Reports generated with the Pie Chart tool allows the user to show and hide different pies by clicking on the sections, questions and responses.

Answer Groups – A collection of options from which a survey taker can select an appropriate response. For example, multiple choices in a dropdownlist, consisting of two options: Yes, and No.

Asset – See *Resource*

Displacement – To emphasize a slice in a pie chart, it can be made to appear disconnected from the rest of the pie. In other words, when displacement is applied to a slice, it appears to be a slightly offset (by about 15 pixels) from the rest of the pie.

Element – A part of the survey. Surveys consist of separate elements such as design, sources, answer groups, and questions. The element may be unique and specific to the survey or may be a reusable resource.

Fully Qualified URL: The complete URL to a Web resource, such as an image, which includes the complete path to the resource including domain name, sub-folders, filename and extension. A *Relative URL*, by contrast, offers a shorter path to one resource from another without specifying domain name and folder paths depending where the one path is located in relation to the other. All resource paths included in the HTML Layouts *must* specify Fully Qualified URL's.

Purge – Delete test data submitted by administrators for testing purposes.

Resource – A *resource*, or *asset*, is any piece of data that can be re-used by survey elements. A resource is created and then applied to the survey element, often by selecting the resource from a list of available resources. An example of a resource is Page design, which can be applied to multiple surveys.

Sources (External Sources) - Tables in separate SQL Server databases other than the Survey Engine's database (EDC) that can be used to provide data for populating response controls such as dropdown lists.

Test Data: Submission results for surveys for logged in users. When an administrator logs into the Admin Tool, previews a survey and submits the survey, the data is stored in the database and flagged as test data. This can be used to preview how results will appear in the analyzers. Since this is not actual data from authentic survey takers, this data can be purged at any time.

Truncation: Labels appearing on pie slices in the Pie Chart tool may exceed the width of their slice or even go beyond the boundaries of the pie chart graphic. If this happens, you can truncate text labels appearing in slices to as few as 5 characters in length.